

FIRST LOOK: SONY DIGITAL CAMCORDER

VIDEO

INCORPORATING SOUND & IMAGE

MAGAZINE

TOP TEN

10 Affordable
Hi-Fi VCRs
Tested & Compared

AC-3 STRIKES!

Dipole Surrounds
and Dolby Digital

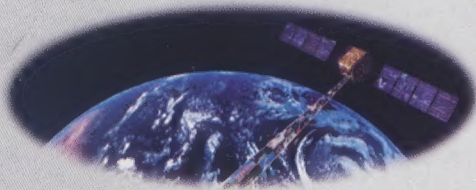
SCENE STEALERS

Movie Scenes for
System Evaluation
(and Showoffs!)

REVIEWED

Toshiba's 61-Inch
Rear Projector





**IT'S THE BIGGEST
ADVANCE IN SATELLITE
TELEVISION SINCE THE
MINI-DISH.**

**IT'S THE MINI-DISH
YOU DON'T HAVE
TO BUY.**

And it's only available from PRIMESTAR.

With PRIMESTAR, the complete mini-dish satellite TV service, there's no equipment to buy. Starting at about a dollar a day,* you'll get the use of the mini-dish, maintenance and all kinds of programming, including movies, news, and family shows.

PRIMESTAR brings you the very best in television, all in digital-quality picture and sound. Our complete, comprehensive lineup includes The Disney Channel, three channels of HBO, two channels of Cinemax, the leading regional sports networks, ESPN, TNT, TBS and much more.

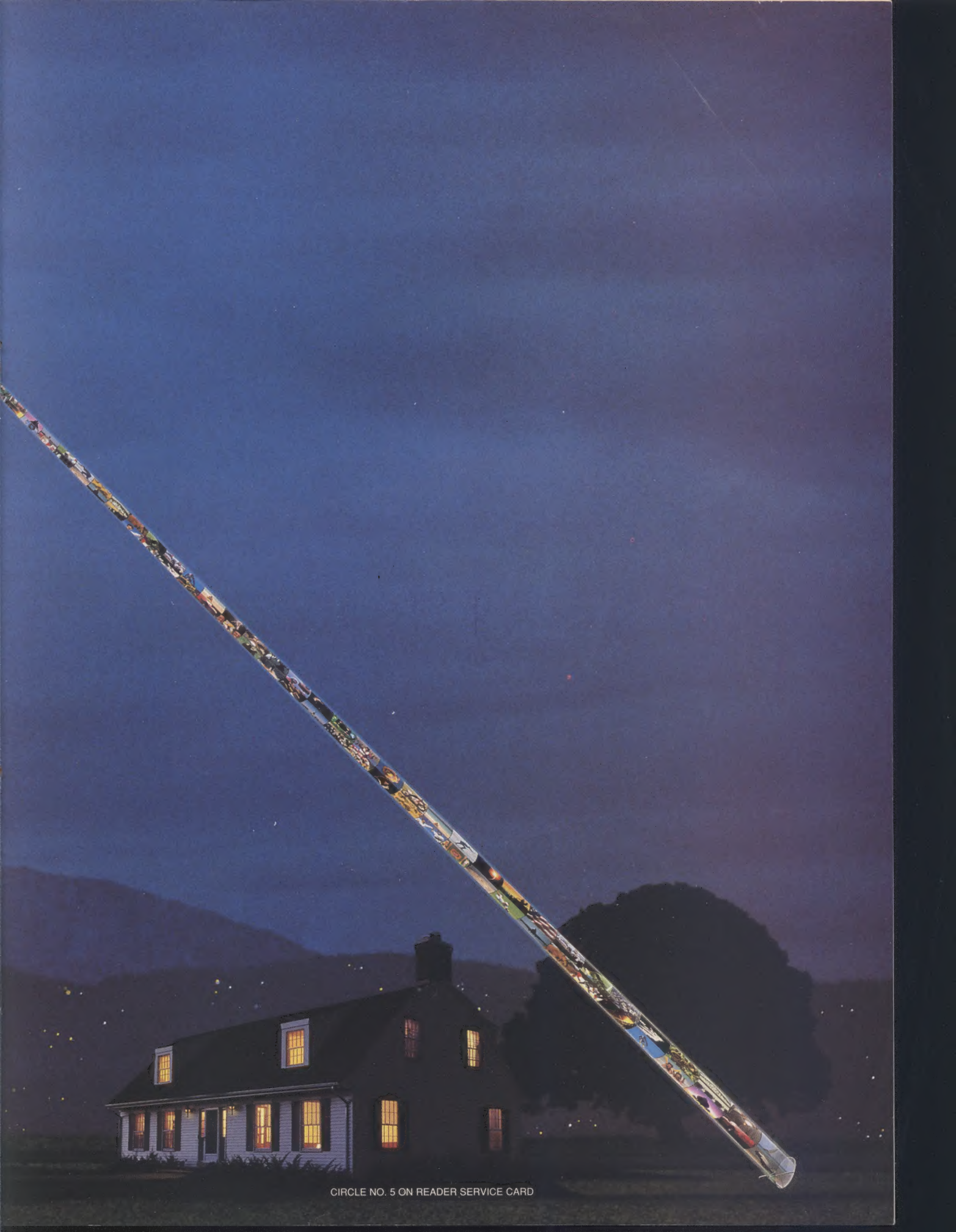
So start getting the entertainment you want. Just call 1-800-PRIMESTAR.

*Prices may vary. Does not include installation.
Blackout restrictions apply.

PRIMESTAR®

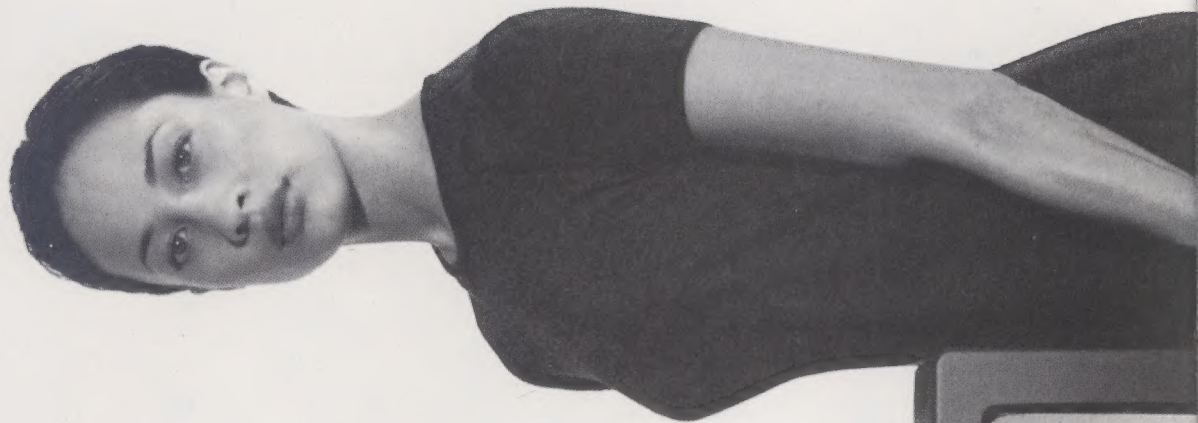


1-800-PRIMESTAR

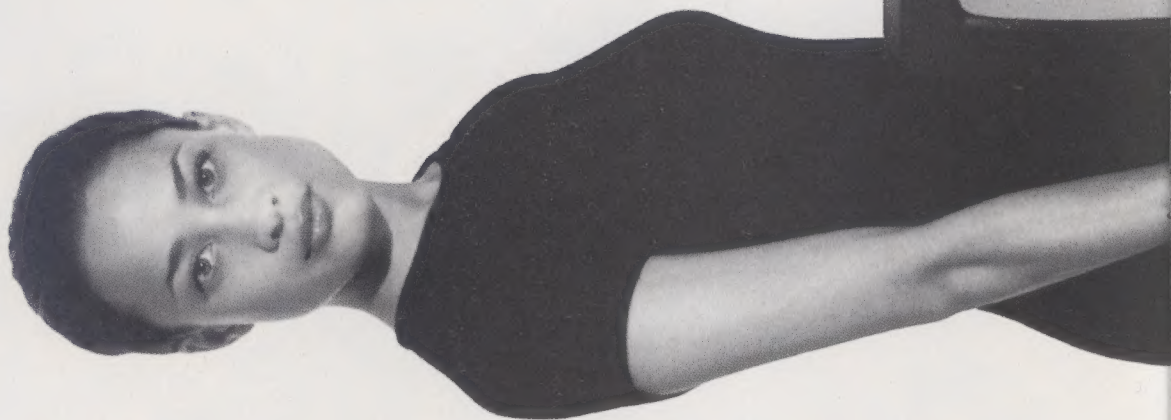


CIRCLE NO. 5 ON READER SERVICE CARD

SAMSUNG



simply related. a TV and a VCR born together.





TVCRs available in 13", 19" and 25". 1800 so simple. simply samsung.

Hitachi Proudly Brings **ULTRAVISION Quality** ***To Camcorders!***

FOR OVER FIVE YEARS,

Hitachi has led the home entertainment industry with the *best* projection TV in picture and sound, with ULTRAVISION. The standards of excellence the ULTRAVISION name has represented in television are now in camcorders with the introduction this year of the VMH710A!

The engineers at Hitachi have achieved what few can do: create a camcorder that is innovative and yet, affordable. Let's take a closer look at the camcorder that proudly calls itself ULTRAVISION!

1 HI-8 RESOLUTION AND HI-FI STEREO

Clarity and detail are critical to making the picture look the best it can. The ULTRAVISION VMH710A achieves over 400 lines of resolution, more than 42% better than TV programs! The VMH710A records images 63% better than VHS, VHS-C and 8mm standard resolution camcorders, which achieve no more than 250 lines of resolution. And you'll see that difference on whatever TV you play the videotape on. ULTRAVISION sound quality is Hi-Fi stereo, microphone and recording. Better than 90db of audio quality is achieved!

2 A.A.I.T. AND D.S.P. III

How a camera interprets the image it sees makes the difference between ordinary and extraordinary! Hitachi engineers developed years ago a technology that utilized the benefits of microprocessors. Called Advanced Artificial Intelligence Technology (A.A.I.T.), the software controls the

image coming in through the lens for focus, white balance, aperture (iris) functioning, high-speed shutter, backlight compensation and wind noise. The VMH710A employs a third generation 16-bit Digital Signal Processor (DSP) to regulate these functions rapidly. The result to you are videotapes that are color accurate and detailed. Yes, your memories are preserved with the quality they deserve, ULTRAVISION quality!

3 AA BATTERY BACKUP... A FIRST!

Many camcorder users will tell you how frustrating it is to run out of power when you most need it. Hitachi's engineers recognized the need and solved a major hassle for all of us! The VMH710A has the capability of inserting 6 AA alkaline batteries for an additional 50 minutes of power! AA Batteries are sold almost everywhere, so you are just a store away from more power to continue those precious memories!

4 COLOR EVE, EIS AND INSTANT ZOOM

Ease-of-use is a must with any camcorder. The VMH710A has been designed to be user-friendly. We see in color; the viewfinder of the VMH710A is color so that no details of a scene will be missed! To keep your videotapes stable, Hitachi engineers developed an Electronic Image Stabilizer (EIS) that maintains picture quality while smoothing out any extra motion. Using angular motion sensors, the camcorder will determine if you are shaking the camcorder and respond properly. And

Instant Zoom is just a button push away! No zoom is faster; wherever you have zoomed to, Instant Zoom takes you 1.5x closer instantly! That's valuable when recording a moment that comes quickly! All controls are conveniently located on the end of the camcorder, for easy access when you need them!

5 BLANK SEARCH / DATE SEARCH

Hitachi engineers recognized that time passes between shooting scenes on videotape. We often lose our place on the tape and can easily record over a scene that we intended to keep. Blank Search was designed to easily locate the area of tape that is free and usable. No more mistakes and loss of valuable memories! Date Search is a simple method locating the scene you wish to review with ease. Each time you begin to record, the date is imprinted on a memory chip. In playback mode, use this method to easily locate the memory by the date you recorded it!

CONCLUSION

These are just a few of the thoughtful and innovative features that make the VMH710A a breakthrough in performance. Visit your local Authorized Dealer today and experience for yourself the quality and value of the ULTRAVISION VMH710A! And see for yourself how Hitachi engineers made a quality camcorder affordable to you!

For more information about the Hitachi VMH710A please call: 1-800-HITACHI

CIRCLE NO. 56 ON READER SERVICE CARD

*Pursuing the standard of
excellence set by the
VME55A & VME58A
top-rated camcorders,
two years in a row.*

*#1 rated by a leading
consumer magazine*



DOUBLE AA BATTERY PACK

ULTRAVISION VMH710A CAMCORDER

The new standard in performance and value!

HITACHI



Here's a switch - speakers that change with you.

In the past, you bought a specific speaker to do a specific job. When your needs changed, typically so did your speaker. NHT introduces the future: The VT-1A. A revolutionary new speaker that goes from optimum surround sound to tight, focused audio at the flip of a switch.

Move from center aisle at the cinema, to third seat flute section, as fast as you can turn your wrist. Because we've taken home theater to a new level. Where the choice is no longer between movies and music, it's between NHT and everybody else.



USE YOUR HEAD.

Now Hear This, Inc., 535 Getty Court, Bldg. A, Benicia, CA 94510

For the NHT dealer nearest you: (U.S.) call 1-800-NHT-9993; (Canada) Artech Electronics Ltd., (514) 631-6448

CIRCLE NO. 11 ON READER SERVICE CARD

NOVEMBER 1995

VIDEOTM

MAGAZINE

FEATURES

- 26 TALE OF THE TAPE**
10 affordable Hi-Fi VCRs tested and compared
- 35 SURROUNDED**
Part III: Dipoles or monopoles for AC-3 surround?
Power Play: AC-3 and power amplification
- 40 MAKING THE SCENE**
Reference scenes for home-theater evaluation



HOME THEATER VIDEOTESTS

- 51 TOSHIBA TP61E90** 61-inch rear-projector
- 54 TECHNICS SA-TX1010** THX-certified A/V receiver
- 61 MAGNAVOX TP3272** 32-inch direct-view TV set

VIDEO FILE

- 78 DV NATION** The DV format takes tape to the next level
- 82 NEW TECH** Canon Hi8 camcorder with Eye Control
- 84 VIDEOTEST** Sony DCR-VX1000 digital camcorder
- 86 VIDEOTEST** Fast Video Machine Lite video editor

MULTIMEDIA

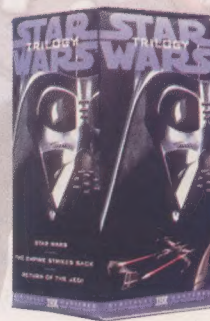
- 98 LOOK SHARP** New MPEG-1 options for MPCs
- 100 NEW TECH** Gateway MPC with four-disc CD-ROM changer
- 100 SHORTWARE** Nintendo Virtual Boy 3-D game system
- 102 SOFTWARE** *J. Robert Oppenheimer and the Atomic Bomb*



DEPARTMENTS

- 8 CHANNEL ONE** Tape counter, DVD news flash!
- 10 FEEDBACK** DVD concerns, DSS notes
- 15 FAST FORWARD** Runco's mirror ball, THX and videotape
- 19 DIGITAL REALITY** Toshiba's powerful DVD family
- 65 NEW TECH** RCA second-generation DSS package
- 71 SHORTWARE** Denon AC-3-ready LD player, Panasonic no-frills S-VHS VCR, Rock Solid home-theater speaker set, Onkyo A/V integrated amplifier
- 91 SOFTWARE** *Pulp Fiction*, *While You Were Sleeping*, *Casper*
- 140 OFF THE AIR** Into the ring with "Amazonic" videos

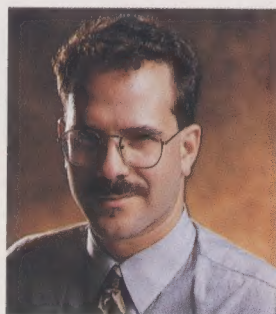
ON THE COVER Sony DCR-VX1000 (page 84) and GoldStar GVR-E468, Toshiba M-661, and Panasonic PV-4562 (page 26) **COVER PHOTO** Tony Cordoza



91



Tape Counter



■ WHETHER YOUR ENCOUNTERS WITH VIDEOTAPE are limited to fruitful forays into the local rental shop or you indulge in the considerable pleasures of capturing events—personal or otherwise—with a

camcorder, the latter half of this decade is going to be good to you.

■ Digital camcorders have arrived with the force of a comet (see "DV Nation," page 78), and the DV format is a technical marvel. As our "VIDEO Test" of Sony's groundbreaking DCR-VX1000 shows (page 84), it takes videography well past the benchmarks of Hi8 and S-VHS. Anyone who currently enjoys the services of an S-VHS VCR is advised to invest in a bib until DV-format VCRs are released.

And the new format proves that, despite the vast sea of data involved, uncompromising digital video is a practical reality. ■ The comparisons to Hi8 and S-VHS are key, since both formats—despite their excellent performance—remain relatively exclusive. Along with the laserdisc, they're the Ferrari and

Lamborghini of video. If you want to cruise with 500 lines of horizontal resolution, your DV chariot awaits, and you'll be in elite company. ■ For those whose tastes and needs lean toward the Taurus or Camry, the standard VHS format remains, as ever, your faithful servant. "Tale of the Tape" (page 26)

reaffirms its indispensability as a fixture in our homes, and we can't help but be impressed by the performance and convenience features that \$300 or so can buy. The THX division of Lucasfilm Ltd., which has done so much to focus attention on quality in both home-theater hardware and LDs, has embarked on the first of what may be many tape transfers (page 15). And VHS is rivaled only by

C-band satellite systems in the diversity of its programming—in addition to thousands of movies, art, education, and yes, even "Amazonic" videos (page 140) are abundant. ■ Is videotape ready for The Big Rewind? Not by a long shot.

■ Just as we go to press, reports from Tokyo say that Philips, Sony, and Toshiba have agreed on a single digital videodisc standard. As Ken Pohlmann surmises in "Digital Reality" (page 19), it appears that the new format—which has not yet been named—will be closer to Toshiba's proposal than Philips and Sony's.

■ The issue of the new format's name is crucial for the three manufacturers in terms of royalties. Philips and Sony are pressing for Multimedia CD; the name implies that the new format is related to the CD, for which Philips and Sony hold the key patents. Toshiba, naturally, prefers their Super Density moniker.

■ Due to the complexity of the negotiations, the first DVD players and software are now expected to hit A/V shops in September or October of 1996.

DVD players are still expected to cost between \$500 and \$600. ■

Bill Wolfe

VIDEO

MAGAZINE

BILL WOLFE
Editor-in-Chief

Executive Editor MARC HOROWITZ
Technical Editor LANCELOT BRAITHWAITE
Senior Editors PETER BARRY
ROB SABIN

Art Director LAURA SUTCLIFFE
Managing Editor MIKE METTLER

Associate Editors JOSEF KREBS
CHUCK TANNERT

Associate Art Director MI KHOO
Assistant Art Director GARY FRENCH

Project Coordinator BARBARA AIKEN
Database Manager JOSÉ L. GARCIA

Contributors Stewart Applegath, Michael Desmond, M. Faust, Pete Hisey, Ken Korman, Daniel Kumin, Timothy Liebe, Kevin Miller, Mel Neuhaus, Tom Nounsaine, Ken C. Pohlmann, Cliff Roth, Andy Wickstrom, James K. Willcox

TONY CATALANO
Vice President and Group Publisher

CONSUMER ELECTRONICS GROUP ADVERTISING

Publisher, VIDEO: Jay Rosenfield
212.767.6062
VP and Associate Publisher:
Scott Constantine 212.767.6346
Regional VP/Ad Director, East Coast:
Charles L.P. Watson 212.767.6038
Regional Account Manager, East Coast:
Christine B. Forhez 212.767.6025
Account Executive:
Penry Price 212.767.6077
Midwest Advertising Manager:
Jerry Stoeckigt 312.923.4804
Regional VP/Ad Director, West Coast:
Bob Meth 213.954.4831
West Coast Advertising Manager:
Paula Mayeri 213.954.4830
West Coast Sales Assistant: Nikki Parker
Assistant to the Publisher: Aline J. Pulley
Operations Manager: Sylvia Correa
Advertising Coordinator: Adele Ferraioli-Kalter
Sales Assistant: Yvonne Telesford
National Record-Label Sales Representatives:
The Mitchell Advertising Group (MAG Inc.)
Mitch Herskowitz 212.490.1715
Steve Gross 212.490.1895

Production Director: Patti Burns
Production Manager: Gary M. Krystofiak
General Manager: Greg Roperi
Business Manager: Christine Z. Maillet
Newsstand Sales Director: Margaret Hamilton

HFM VIDEO Magazine (TM)
Hachette Filipacchi
Magazines IS PUBLISHED BY
HACHETTE FILIPACCHI
MAGAZINES, INC.



Chairman: Daniel Filipacchi
President, CEO, & COO: David J. Pecker
Executive VP, Editorial Director: Jean-Louis Ginibre
Senior VP, Global Advertising: Paul DuCharme
President, Hachette Filipacchi New Media:
Paul De Benedictis
Senior VP, Director of Corporate Sales:
Nicholas Matarazzo
Senior VP, CFO, & Treasurer: John T. O'Connor
VP, Marketing Director, Corporate Creative
Service Director: Lynn Chaiken
VP, General Counsel: Catherine Flickinger
VP, Manufacturing & Distribution: Anthony Romano
VP, Circulation: David W. Leckey
VP, Research & Marketing Services: Susan Smollens
VP, Communications & Special Projects:
Keith Estabrook
VP, Magazine Development: Marcia Sachar
Creative Production Director, Global Marketing:
Jean Pierre Labatut
Senior VP, Corporate Sales, Detroit: H.E. (Bud) Allen



GET THE LATEST MOVIES,
THE HOTTEST NETWORKS
AND COMMENTS LIKE
“DAD, CAN WE TALK ABOUT
HOW IT WORKS LATER?”

We'll make this quick. USSB™ brings channel after channel of top movies and a collection of the best entertainment networks right to your TV. All via a simple-to-install, 18-inch satellite dish called the Digital Satellite System (DSS®). So you receive a crystal-clear picture and CD-quality sound. Add DIRECTV® to our unique lineup and over 175 channels are at your fingertips. But enough talk already. Visit your local RCA or SONY retailer to find out about receiving the ultimate TV entertainment from USSB, through DSS technology. Be sure to ask about getting the first month of all our great channels free.



Changing the way you look at TV.



© 1997 USSB, Inc. All rights reserved. USSB is a registered trademark of USSB, Inc. DSS is a registered trademark of Hughes Network Systems, Inc. DIRECTV is a registered trademark of DIRECTV, Inc. All other trademarks are the property of their respective owners.

400 BLOWS

As a dedicated, 15-year laserdisc supporter with over 400 titles in my collection, I find it very disappointing that the video industry is about to introduce not one but two incompatible disc formats ["Fast Forward," "DVD Watch," September 1995]. Who do the DVD backers think is going to buy into this new format? Outside of computer applications, who's asking for it? The disc market has been sputtering along for over a decade and a half just trying to survive. Just because a disc is 5 inches versus 12 isn't going to make people run out and buy it. Most consumers are turned off by discs because you can't record on them, and this feeling will still exist with DVD. I know, I know—a recordable DVD is "in the works." We've heard that kind of talk before.

Joseph J. Solek
Orland Park, IL

As a devoted Beta VCR owner, I can only switch to the upcoming digital videodisc format if a) DVDs can record as well as play back, and b) if DVD makes both the VHS and Beta videotape formats obsolete.

Michael Folkman
Orlando

Hardware and software companies see DVD as the successor to the VHS tape format. We agree that recordability is a key issue; DVD movies must also be available as inexpensive rentals. The latest word (see "Fast Forward," page 16) is that the two DVD camps are now working hard to agree on a single standard. —Ed.

DISH DU JOUR

Thanks for the enlightening technical explanations of DirecTV operation and the review of the Sony DSS system ["Digital Reality," "VIDEO Test

Special," September 1995]. We have an RCA DSS system, a 12-foot C-band dish, a 7-foot screen, and a Runco projector. Until recently, all DirecTV pictures except for those in Colorado-originated "Direct View" pay-per-view programming have been more comparable to VHS tape than to laserdisc. Now the picture resolution has improved, and the digital glitches are generally reduced. There's no way to tell (there's been no announcement), but I suspect that the switch to MPEG-2 is being implemented. The picture *still* isn't as good as C-band analog, though.

Gil Arroyo
Seattle

My RCA dish has two outputs. Can I hook up a Sony receiver to one of them?

Edward J. Wojdylak Jr.
Beaver Falls, PA

DOLBY DIGITAL
AC-3 P.A.C.E. LOGIC
THX



DirecTV and USSB are indeed in the process of "upgrading" to MPEG-2. We've found that you can hook up either dish to either receiver. —Ed.

THE PLANE TRUTH

I live across from New York's LaGuardia Airport, and I'm thinking of buying Sony's SAS-AD1 DSS system. Planes routinely take off to the south of my house. Will they affect my DSS reception?

Frank Albrecht
Flushing, NY

Technical editor Lance Braithwaite replies: It's theoretically possible that you could experience momentary signal loss if a plane flies directly through your dish's "line of sight," but it's very unlikely: The plane would have to block two DSS satellites at once to produce a complete loss of signal lock. To date, we haven't heard

of any plane-related problems.

D-LIGHTFUL

After reading "Tale of the Tape" ["Fast Forward," July/August 1995], I have this response: Hello! Alpha Microsystems has provided data storage using standard VHS VCRs and tapes for years. An ordinary 6-hour VHS tape could reliably store 600 MB, without compression. JVC's upcoming D-VHS format is about as exciting as reruns of *Star Trek*.

Frank Crow
jCrow@aol.com

Technical editor Lance Braithwaite replies: Many digital data-recording systems have been based on video-tape over the years, but that doesn't make them easily adaptable for video storage and playback. One of D-VHS's primary goals is to offer the data throughput that's necessary for

video, which, when uncompressed, requires about 20 Mb of information per second. At that rate, video would eat up your 600 MB in 4 minutes. (If you don't mind changing tapes 15 times an hour, the Alpha Microsystems method sounds great.) And total standard-mode D-VHS storage capacity exceeds 30 gigabytes. It's not just about capacity and speed, though—the D-VHS format's real breakthrough lies in the creation of a complete system, including error correction, that's optimized for video and audio playback, not data storage.

TIME BANDIT

Why are the new "large" DV format tapes limited to 2.25 hours of recording time ["Fast Forward," "Tape Talk," September 1995] when many movies and shows run much longer?

Philip Cavallo
Chicago

THE MOMENT OF TRUTH

You can feel it in your system the moment you turn your Denon Home Theater on. The experience of lifelike soundscapes reproduced by Denon's Surround Sound through discrete Dolby AC-3 and Pro Logic, Lucasfilm's THX, and Denon's DDSC circuitry. This is what sets Denon's Home Theater components apart from the rest.

Denon Advanced Home Theater. The difference between watching and being there.

Denon Electronics a division of Denon Corporation (USA), 122 New Road, Parsippany, NJ 07054 (201) 575-7810

DENON
The First Name in Digital Home Theater

The tape you've referred to is spec'd to have the capacity for 4.5 hours of recording time, with 500 lines of horizontal resolution, in DV's SD (standard-definition) mode. The 2.25-hour figure applies to DV's high-definition mode, which will be compatible with HDTV and presumably produce over 1,000 lines of resolution. —Ed.

GAMES PEOPLE PLAY

I didn't realize 64-bit systems would be available so soon ["Battle Stars," September 1995]. I'll probably wait to see how they look compared to the new 32-bit systems you reviewed before I buy. And I hope prices come down, and software becomes more plentiful, due to competition.

Marvin Chaw

marvin_chaw@primate.ucdavis.edu

I can't believe that Sega and Sony would come out with 32-bit systems when Atari already has a 64-bit system and Nintendo will be coming out with one soon.

Greg Wolock

Columbus, OH

Atari's 64-bit Jaguar hasn't caused much of a stir because game devel-

VIDEO welcomes your
comments and suggestions

MAIL

VIDEO, "Feedback"

1633 Broadway, 45th floor
New York, NY 10019

EMAIL

VideoMag@aol.com

opers aren't widely supporting it with games, and Nintendo's 64-bit Ultra 64 remains a question mark until it actually arrives. Yen/dollar intricacies aside, holiday-season gyrations—and the Ultra 64's introduction—probably won't result in Saturn and PlayStation price reductions. —Ed.

LUCKY 27

I recently purchased the Zenith SM2789BT 27-inch TV ["Shortware," July/August 1995], largely because of the features, price, and the fact that it could be professionally calibrated to NTSC standards. The picture is indeed very good out of the box, and the results after calibration were sim-

ply eye-popping! Please continue to fight the good fight for accurate TV images.

Anne M. Souter

Marshfield, MA

I read the positive review of the Samsung TXC2726 27-inch TV ["Shortware," September 1995] and just had to write. My father gave me Samsung's TXB2525 25-inch TV, the younger brother of the TXC2726, last year. I think its picture quality is excellent, and I know what a good picture looks like. After a year and half of hard use, it's still going strong. Budget-minded consumers should take a look at any Samsung that has a comb filter in it.

Carol Curtis

Boston

Last year, my 1-year-old, major-brand, major-expensive big-screen TV dropped dead. While I was waiting (and waiting) for it to be repaired, I happened upon a local store that had Samsung's TXB2525 on sale for a ridiculously low price. So I bought it. Imagine my surprise when I discovered that the Samsung has a better MTS decoder, more features, and just as good a picture as my big set.

Daniel J. Stagers

Lockport, NY

WATERWORLD

I've had a Sony 36-inch XBR rear-projector for about 8 years, and now have what one service tech described as "water spots" on the CRTs. What I see is colored dots all over the picture. I was told that tipping the set forward would cause the cooling liquid to wash over the lenses and eliminate the visible artifacts—but it just made the situation worse! Is there anything I can do short of replacing the CRTs . . . or the entire set?

JM Venezia

Cedar Grove, NJ

Gently shaking (or tipping) a rear-projector is as likely to make this problem worse as solve it, so it may be worth the risk only as a last resort. In your case, unfortunately, the only remedy appears to be a CRT replacement; a Sony technician reports that tubes for your set are available. —Ed.

Definitive Technology

The Leader in High-Performance Loudspeakers

Authorized Dealers

AK: Alaska Audio; Juneau; Hollis; Fairbanks; Pyramid; Anchorage.
AL: Cohen's Electronics; Montgomery; Kincaid's TV; Tuscaloosa; Likis Audio; Birmingham.
AR: Custom Audio Video; Little Rock.
AZ: Jerry's Audio Video; Phoenix; Tucson.
CA: Access to Music; Larkspur; Accurate A/V; S. Lake Tahoe; Audio Concepts; Long Beach; San Gabriel Bay Area Audio; San Jose; Creative Stereo; Santa Barbara; Ventura; David Ruedge Audio; Palm Desert; DB Audio; Berkeley; Digital Ear; Tustin; Larson's; Redding; Monterey Stereo; Monterey; Pacific Coast A/V; Newport Beach; Paradyme; Sacramento; Performance Audio; San Francisco; Sound Co.; Escondido; San Diego; SpeakerCraft; Riverside; Systems Design; Redondo Beach; Videolek; Westminster; Westchester TV; Bakersfield; Wilson A/V; Woodland Hills.
CO: Listen Up; Denver; Boulder, Colorado Springs.
CT: Al Franklin's; Hartford; Carlson's Audio Video; Danbury; Robert's Audio Video; New London.
DC: Suburbs Audio Buys.
DE: Sound Studio; Newark; Wilmington.
FL: Absolute Sound; Winter Park; Audio Advisors; West Palm Beach; Audio Center; Deerfield Beach; Cooper for Stereo; Clearwater; Hoyt Stereo; Jacksonville; Palm Audio; Destin; Sensuous Sound; Tampa; Sound Components; Coral Gables; Sound Ideas; Gainesville; Sound Insight; Ft. Pierce; Stereotypes; Daytona Beach; Stereo World; Ft. Myers; Naples; Stuart A/V; Stuart.
GA: Audio Warehouse; Savannah; Van's Stereo; J.L. Mason; Laser Disc Enterprises; Atlanta; Heart TV; Columbus; Stereo Connections; Valdosta; Stereo Festival; Atlanta; Stereo Shop; Martinez.
HI: Audio Center; Honolulu.
IL: Archer Audio Video; Ft. Dodge; Audio King; Cedar Rapids; Des Moines; Audio Video Logic; Des Moines; Camera Corner; Davenport; Hawkeye A/V; Iowa City; Waterloo.
ID: Ultimate Electronics; Boise; Wise Buy; Idaho Falls.
IN: United Audio Ctr.; Chicago & Suburbs; Camera Corner; Bloomington; Cars & Stereo; Rockford; Jon's Home Ctr.; Quincy; Sd Forum; Crystal Lake; Select Sd; Naperville; Sundown A/V; Springfield.
IA: Ovalton Audio; Clarksville; Indianapolis.
KS: Accent Sound; Overland Park; Advance Audio; Wichita; Audio Jet; Junction City.
KY: Ovalton Audio; Lexington; Louisville.
LA: Allerman Audio; New Orleans; Metairie; Sound Advice; Baton Rouge; Wright's Sound Gallery; Shreveport.
MA: Cookin'; Saugus; Goodwins Audio; Boston; Shrewsbury; Nantucket Sound; Hyannis.
MD: Audio Buys; Annapolis; Gaithersburg; Laurel; Rockville; Waldorf; Gramophone; Ball; Ellicott City; Soundstage; Baltimore.
ME: Cookin'; Portland; Source; Bangor.
MI: Pecar's; Detroit; Troy; Classical Jazz Holland; Classic Stereo; Gleanings; Grand Rapids; Front Row A/V; Flint; Future Sound; Ypsilanti; Court St. Listening Rm.; Midland; Saginaw.
MN: Audio Designs; Winona; Audio King; Minneapolis & Suburbs; Rochester; St. Cloud; Audio Perfection; Minneapolis.
MO: Independence A/V; Independence; Sound Central; St. Louis.
MS: McLelland TV; Hattiesburg; Players A/V; Ridgeland.
MT: Car & Home Stereo Ctr.; Billings; Rocky Mt. Hi Fi; Great Falls.
NC: Audio Video Systems; Charlotte; Audio Visions; Wilmington; New Audio Video; Durham; Greensboro; Raleigh; Winston Salem; Audio Lab; Wilmington; Tri City Elect.; Conover.
NE: Custom Electronics; Omaha; Lincoln.
NH: Cookin'; Nashua; Manchester; Newington; Salem; S. Nashua.
NJ: Hal's Stereo; Trenton; Monmouth Stereo; Shrewsbury; Wall Sound Waves; Northfield; Woodbridge Stereo; West Caldwell; Woodbridge.
NM: Ultimate Elect.; Albuquerque; Sound Ideas; Albuquerque.
NV: Ultimate Elect.; Las Vegas; Upper Ear; Las Vegas.
NY: Audio Breakthroughs; Manhasset; Audio Den; Lake Grove; Audio Designs; Newburgh; Audio Junction; Watertown; Clark Mus.; Albany; Syracuse; Stereo Erchje; Manhattan; Nanuet; Hart Elect.; Ithaca; Vestale Innovative Audio; Croton.
OH: Listening Rm.; Searsdale; Rowe Camera; Rochester; Sound Mill; Mt. Kisco; Yorktown Hts.; Speaker Shop; Amherst; Buffalo.
OK: Contemporary Sds; Ok. City; K Labs Premium Audio; Tulsa.
OR: Audio Craft; Akron; Cleveland; Mayfield Hts.; Westfield; Audio Etc.; Dayton; Paragon Sound; Toledo; Threshold Elect.; Heath.
PA: Bradford's HiFi; Eugene; Chelsea A/V; Portland; Beaverton; Kelly's Home Ctr.; Salem; Larson's; Medford; Roseburg; Stereo Plant; Bend.
PA: Gary's Elect.; State College; GNT Stereo; Lancaster; Hart Elect.; Bakely; Kingston; Hi Fi House; Abington; Broomall; Hi Fi House; Harrisburg; Camp Hill; Listening Post; Pittsburgh; Palmer Audio; Allentown; Stereoland; Natrona Heights; Studio One; Erie; The StereoShop; Greensburg.
RI: Stereo Discount Ctr.; Providence.
SD: A/V Design; Charleston; Custom Theater & Audio; Myrtle Beach; Upstairs Audio; Columbia.
SD: Audio King; Sioux Falls.
TN: College HiFi; Chattanooga; Hi Fi Buys; Nashville; Now Audio Video; Knoxville; Modern Music; Memphis; New Wave Elect.; Jackson; Sound Room; Johnson City.
TX: Home Entertainment; Dallas; Houston; Plano; Audio Tech; Temple; Waco; Audio Video; College Station; Brock A/V; Beaumont; Buckley's Sd. Systems; Abilene; Bismar; San Antonio; High Fidelity; Austin; Kynel Clear; Dallas; Marvin Electronics; Ft. Worth; Sd. Box; San Angelo; Sd. Quest; El Paso; Sd. Systems; Amarillo; Sd. Towne; Texarkana.
UT: Alpine Elect.; Provo; Audio Works; Salt Lake City; Crazy Bob's; St. George; Stokes Bros.; Logan; Ultimate Elect.; Layton; Murray; Orem; Salt Lake City.
VA: Audio Buys; Arlington; Fairfax; Falls Church; Manassas; Audio Connection; Virginia Beach; Audiophonics; Roanoke; Home Media Store; Richmond; Stereo Type; Charlottesville.
VT: Audio Video Authority; S. Burlington.
WA: Definitive Audio; Bellevue; Seattle; Evergreen Audio; Silverdale; Pacific St. & Sd.; Wenatchee; Tjn Ear; Kennewick.
W.VA: Sound Post; Princeton.
WI: Audio Emponum; Milwaukee; Absolute Sd. & Vision; Sheboygan; Hi-Fi Heaven; Appleton; Green Bay; Sd. World; Wausau.
PR: Puerto Rico; Precision Audio; Rio Piedras.
Canada: A & B Sound; Calgary; Edmonton; Kelowna; Vancouver & Suburbs; Victoria; Advance Electronics; Winnipeg; Bay Bloor Audio; Toronto; Centre Audio Charest; Trois Rivières; CDR; Quebec City; Digital Dynamics; Clearbrook; Grant West Audio; London; Lipton's; New Market Ontario; Peak Audio; Halifax; Sd. Room; Vancouver; Stereoland; Windsor; Treble Clet; Ottawa.
Mexico: Contact Grupo Volumen; Mexico City.

Definitive's New BP2000 Brings You the Ultimate Listening Experience!

"The first speaker I have been able to audition in my own familiar surroundings that has given me that special thrill that usually costs ten or more times its price to obtain."

—Julian Hirsch, *Stereo Review*

"Frankly, if circumstances allowed, I would choose these speakers for myself."

—Julian Hirsch, *Stereo Review*

Speaker of the Decade

Now, with the BP2000, Definitive literally reinvents the loudspeaker. We have combined a six-driver dual D'Appolito bipolar array with a built-in (side-firing) 300-watt powered 15" subwoofer. (Yes, a complete powered subwoofer built into each speaker!) The result is extraordinary sonic performance beyond anything you've ever heard.

Both music and movies are reproduced with unequalled purity, transparency and lifelike realism. And the astounding high resolution imaging and awesome bass impact totally envelop you in sonic ecstasy. They are an amazing achievement!



Definitive's complete AC-3 ready BP2000 Home Theater System is the perfect choice for ultimate music and movie performance.

The Ultimate Home Theater

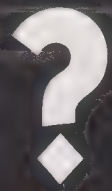
In addition to being an audiophile's dream, the BP2000s are also the main speakers in Definitive's AC-3 ready Ultimate Home Theater System. This astonishing system is absolutely the finest sounding available. It recreates a "you are there" spatial reality that actually puts you into the soundspace of the original cinematic action.

The complete system combines the BP2000s (\$1499 ea.) with a C/L/R 2000 center (\$650 ea.) and BPX bipolar surrounds (from \$399 ea.). Of course, dual 15" powered subwoofers are already built into the sleek BP2000 towers. Truly the ultimate listening experience! Visit your Definitive dealer today.

Definitive Technology®
The Leader in High-Performance Loudspeakers™

11105 Valley Hts. Dr. • Baltimore, MD 21117 • (410) 363-7148

HAVE YOU OUTGROWN TELEVISION



TOSHIBA

If deep down inside you secretly long for a heart-pounding, eye-popping home entertainment experience, you haven't outgrown TV, you've just outgrown your television set.

Toshiba presents TheaterView®. An unprecedented line of projection TVs with eight distinct models that offer astounding image and sound quality. Immeasurable excitement. And one technological breakthrough after another.

Imagine brilliant, crystal-clear images. Our High Contrast Dark

Screen maximizes color depth and richness - for a breathtaking picture in four different screen sizes, from 48" to 61", and two formats, conventional and widescreen.

Discover dramatic sound with TheaterView's built-in 4-channel Dolby® ProLogic® and Digital Sound Processing. With an incredible 68 watts of total audio power, it lets outstanding sound quality

literally explode from the screen. Turning your living room into a theater, a

concert hall, even a stadium. All in a cabinet so slim, it takes up less depth than a regular 27" set, allowing it to fit in any room.

Best of all, TheaterView not only lets you experience cable, satellite, VCR and videodisc systems today, it's ready now for whatever tomorrow brings.

Toshiba TheaterView. It's as good as television gets.

In Touch with Tomorrow
TOSHIBA

Toshiba America Consumer Products, Inc., ■ Totowa Road, Wayne, NJ 07470

THEATERVIEW®
AS GOOD AS TELEVISION GETS™

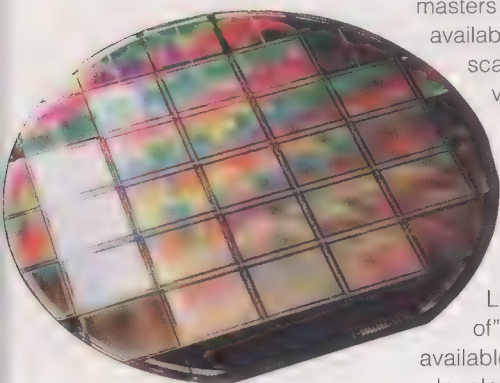
TheaterView is a registered trademark of Toshiba America Consumer Products, Inc.

CIRCLE NO. 65 ON READER SERVICE CARD

Dolby and ProLogic are registered trademarks of Dolby Laboratories Licensing Corp.

mirror image

Runco, the well regarded front-projection TV manufacturer, has formed an alliance with Texas Instruments to put TI's Digital Light Processing (DLP) technology in front- and rear-projection TV systems. Runco recently unveiled a rear-projection prototype and expects to have models—their first rear-projectors,



incidentally—in A/V shops a year from now.

DLP technology is based on the Digital Micromirror Device (DMD), which in simple terms can be described as a light switch on a semiconductor chip. The chip holds between one-half and 2 million metal mirrors, each of which is controlled by computer signals. The mirrors reflect light from a source (perhaps a 1,000-watt xenon-arc bulb) and project it onto a screen. A DLP set is said to deliver very bright images with improved detail, clarity, color, and contrast regardless of screen size. Runco and TI say DLP sets will be priced competitively against LCD and CRT display devices in the near term.

—Peter Barry

thx strikes back

THX's latest project leaves the rarefied world of laserdiscs and high-end home theaters behind: They've put their stamp of approval on the latest and, reportedly, final release of the *Star Wars Trilogy*, which happens to be a FoxVideo videotape. The *Trilogy* (\$50; \$20 per film) was transferred from THX's digital laserdisc masters and will be

available in both pan-and-scan and widescreen versions—but only during the holiday season.

Each cassette features exclusive interviews with director George Lucas. A "making of" videotape is also available (\$10).

In releasing a special package just for the holiday season (*Trilogy* will be taken off the market—"forever," according to

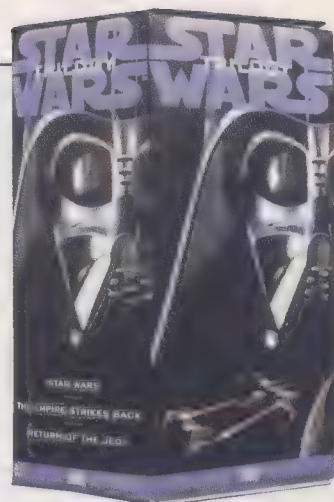
THX—at the end of January), THX has taken a page out of Disney's wildly successful, one-time-only Christmas '91 release of *Fantasia*.

THX says they're looking into working on other videotape releases.

—PB

money balks

NBC turned heads recently when they announced that they'll pay \$1.27 billion for the TV rights to the 2000 Summer Olympics in Sydney, Australia and the 2002 Winter Games in Salt Lake City, Utah. No one's head turned further (a full 360 degrees, perhaps) than Rupert Murdoch's; the Australian-born owner of the Fox TV network had just had his \$701 million bid for the Sydney Games alone turned down by the International Olympic Committee (IOC).



Applaud NBC Sports for making friends in the right places. NBC has a very good buddy in the International Olympic Committee, having spent a total of \$1.16 billion to buy the TV rights to the '88, '92, and '96 Summer Olympics.

Money, apparently, wasn't the only issue for the IOC. They ignored Fox's bid because it "wasn't credible enough," says Francois Carrard, the IOC's director general. Translation: The IOC just doesn't like the audacious Murdoch and, in all

true eyes

Researchers at the National Institute of Standards and Technology (NIST) are trying to adapt rhodopsin, a light-sensitive protein commonly found in the human eye, for use as a storage technology. Considering how rapidly the human eye can process enormous amounts of sensory data, the technology could yield processing speeds that are 1,000 times faster than today's computers.

Proteins in the eye respond instantaneously to light stimuli. NIST is

studying rhodopsin to better understand how it changes when subjected to light of varying color and intensity.

Since rhodopsin molecules respond individually to stimuli, in theory each one could serve as an on/off switch for storing data. These molecular switches would be 1,000 times smaller than the transistors used in PCs, and smaller switches mean more switches, which equals faster processing.

—Douglas Page





likelihood, his network's maverick ways.

Experts say that by accepting an offer that included Salt Lake City a full 7 years before the actual Games, the IOC probably left some money on the table. But the IOC took the high road: "We have a common experience and a sense of comfort with networks we've done business with," says Carrard. "Money isn't the only thing that counts."

—Richard Sandomir

send me

The top-of-the-line model in RCA's second-generation of DSS packages simplifies the

process of sending programming from room to room.

Borrowing a page from the Channel Plus+ multiroom distribution system, the receiver in the DS7430RA system (\$1,000) can send signals over an unused TV channel to other rooms via standard coaxial cable.

To take advantage of this feature, called Channel Select, you have to run a length of coax from the receiver to your home's master-antenna distribution system; a video splitter and/or a signal amplifier may need to be installed in order to finish the job. Then you simply access the Channel Select feature from an on-screen menu provided by the receiver and enter the number of any unused channel. Thereafter, tuning that channel on any TV that's connected to the master-

antenna distribution system will tap into the DSS signal.

If the system employs one DSS receiver, only one DSS program can be viewed at any given time. If RCA's DRD102RW add-on receiver (\$650) is employed, however, two different programs can be enjoyed simultaneously.

—Marc Horowitz

mpc tv

Microsoft is working with the NBC TV network and DSS programmer DirecTV to develop ways to broadcast data, multimedia programming, and online services directly to multimedia PCs (MPCs).

The computer software giant expects to offer a broadcast version of their Microsoft Network online

service, possibly with content supplied by NBC. Microsoft also hopes to use the vertical blanking interval (VBI) of terrestrial broadcast channels as well as dedicated DirecTV channels to transmit data and multimedia clips.

The possibilities are intriguing: Player stats



dvd watch

Reports from the International Funkausstellung, the huge semi-annual electronics show held in Berlin, confirm that Sony/Philips and Toshiba are for the first time talking seriously about merging their incompatible digital videodisc (DVD) standards into a single unified format. Pressure from the computer

industry is said to be the catalyst.

That pressure came in the form of a report issued last August by an

ad-hoc "technology committee" that included representatives from Apple, Hewlett-Packard, IBM, and Microsoft. The committee, though acknowledging that both Sony/Philips' Multimedia CD (MMCD) and Toshiba's Super Density (SD) formats were acceptable, refused to side with either format and instead forcefully communicated the computer industry's

desire for a unified standard.

The computer industry's intervention reinforces how important DVD has become to the electronics world at large: DVDs will be used for video, audio, and multimedia applications, and neither Sony/Philips nor Toshiba seem willing to proceed without the computer world's blessing.

One potential side-effect: If the two DVD camps don't agree on a single standard soon, but still press forward with negotiations, the DVD launch may have to be pushed back from the often-mentioned June 1996 date.

• The Video Software Dealers Association (VSDA) has formed an advisory committee of its own to concentrate on crucial DVD packaging issues. Representatives, including bigwigs from Blockbuster Entertainment and Tower Records/Video, are pre-emptively lobbying DVD manufacturers on uniform packaging, various environmental issues, and strategies for differentiating DVD packaging from CD-ROM packaging. Does this mean we won't be dazzled by those big cardboard boxes with nothing but a disc and a booklet inside? —MH

THE NUMBER

42

devised a solution.

The problem was eventually traced to miscommunication between "enhanced"

SONY

INTRODUCING

A NEW WAY TO RECORD IMAGES

THAT WILL LAST FOR GENERATIONS



DNTM



process of sending programming from room to room.

Borrowing a page from the Channel

antenna distribution system will tap into the DSS signal.

If the system employs one DSS



D

I

E



H A N D Y C A MTM

THE NUMBER

42

devised a solution.

The problem was eventually traced to miscommunication between "enhanced"

TRAIL



C A M C O R D E R

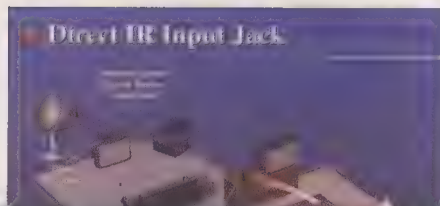


process of sending programming from room to room.

Borrowing a page from the Channel

antenna distribution system will tap into the DSS signal.

If the system employs one DSS



Since the introduction of the Handycam® camcorder a decade ago, Sony has been the unparalleled leader in the camcorder industry. With technological breakthroughs like Hi8, SteadyShot™ Picture Stabilization and RC Time Code, Sony has consistently raised video recording and editing to higher levels of quality and performance.

Today, Sony introduces its newest innovation. The Digital Handycam™ camcorder. Sony's first consumer camcorder featuring the Digital Video Cassette (DV). The standardized format agreed to by 55 leading electronics, tape, and computer companies worldwide.

It's a whole new, and superior way to record, playback, edit, and print your video images.



With the new Digital Video format, your images will have more precise detail and accurate color than you ever thought possible with an analog camcorder. Because the highly advanced digital technology delivers:

- 500 lines of horizontal resolution achieved by a 13.5 MHz sampling frequency—for a resolution higher than the NTSC TV broadcast standard.
- Digital Component Recording that divides the Chrominance (color) signal into separate R-Y and B-Y signals and uses a band width that carries 3 times as much data as analog NTSC video. The result is a virtual elimination of color blurring.

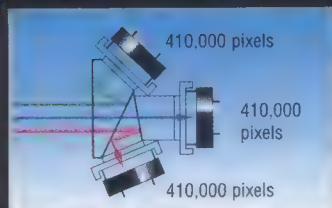
- Time Base Correction for stable picture and minimal jitter.
- Powerful Error Correction system that compensates for tape dropout or other errors.

devised a solution. The problem was eventually traced to miscommunication between "enhanced"

Introducing Sony's Digital

As the unsurpassed leader in camcorder and digital technology, our Video format. We've re-designed and re-engineered every camcorder to meet the caliber of Digital Video. The result: the DCR-VX1000, high-quality video that will last for generations.

3CCD Camera System. The same advanced optical system used in professional video cameras. Features a dichroic prism that divides the image into its separate red, green and blue light components and directs them to one of three CCDs,



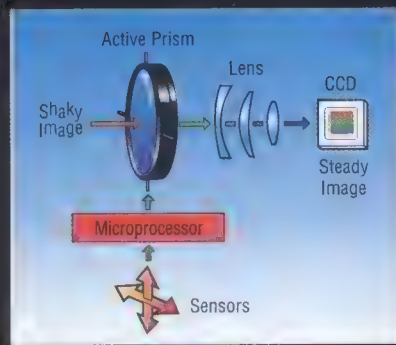
each with 410,000 active pixels. The result is CCD imaging using over 1.2 million pixels, providing excellent color fidelity and better signal-to-noise ratio.



4-Capsule Mic and Audio Digital Signal Processing. For clear stereo separation and superior wind noise reduction. Without using harsh filtering.

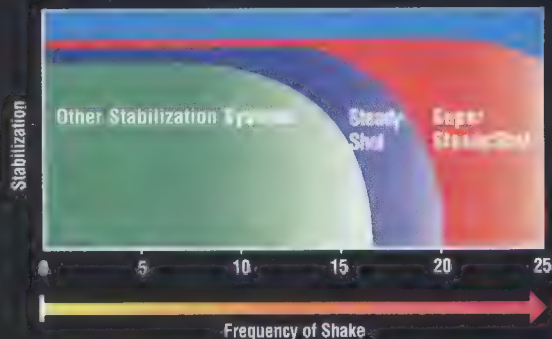
Super SteadyShot® Picture Stabilization. Unlike many other stabilization systems, the Sony Super SteadyShot system uses horizontal and vertical motion sensors that allow it to work accurately while zooming, shooting moving objects and even shooting

Steadies image before it reaches CCD



in low light. And because the Super SteadyShot system uses an Active Prism and Precision CCD imagers, your pictures remain superb with no loss in detail or reduction in size. Even high frequency camera shake can now be minimized.

Minimizing even severe camera shake



Precision 20X Digital Zoom. Unlike other digital zooms that use only a 270,000 pixel CCD, Sony's digital zoom features a Precision CCD with 410,000 pixels that provides up to 20X zoom for sharper, clearer images.



process of sending programming from room to room.

Borrowing a page from the Channel

antenna distribution system will tap into the DSS signal.

If the system employs one DSS

Direct IR Input Jack



Digital Handycam™ Camcorders

Only Sony can uniquely exploit the incredible potential of the new Digital feature, function, and technology to ensure the highest performance and DCR-VX700 Digital Handycam camcorders. The first choice for

Precision Color Viewfinder. High resolution color LCD with 180,000 pixels delivers lifelike monitoring. Plus, an additional Information Sub Panel—with time code, battery, and tape remaining information—is incorporated to avoid screen clutter.



DCR-VX1000

Magnesium Alloy Body. Engineered to be durable, yet lightweight for professional use.



Remote Control: Convenient play, record, FF, RR, and zoom controls.

Extended Data Code: Automatically stores Date/Time/Shutter Speed/Gain/F Stop No. for easy recall.

Time Code: Provides hour, minute, second, and frame information for identifying and locating scenes for accurate editing.

Program Auto Exposure (3-Mode AE). Pre-programmed Shutter Priority, Iris Priority and Natural Night Mode.

Manual Exposure: Iris and Gain (20-step), Shutter Speed (16 speeds, 1/4 to 1/10,000 sec.)

Interval Recording: For time-lapse effects.

Custom Preset: Allows you to store and recall your own custom settings of White Balance Shift, AE shift, Color Control Level, Gain Shift and Sharpness Control.

Lithium Ion Battery: For "no memory" effect and ReadyCharge™ system for in camera charging capability.



DV Interface. Allows multiple generations of editing with virtually no loss in video or audio quality.



devised a solution. The problem was eventually traced to miscommunication between "enhanced"

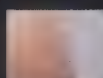
DCR-VX700 The DCR-VX700 offers most of the same features of the DCR-VX1000, except it uses a single 410,000 CCD for imaging and a 2-capsule mic. It also offers special effects like slide wipes and program AE (Sports, High Speed Shutter, Portrait, Natural Night modes)



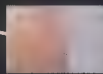
DCR-VX700

Photo Mode and Color Video Printer Expand Your Options

In Sony's unique Photo Mode, you can shoot high-quality, still images with its corresponding audio. Then play them back on your TV. Or print the still pictures with Sony's Color Video Printer (CVP-M1). And because only Sony offers Adaptive Frame Interpolation (AFI) technology, your images, either as prints or on-screen, will appear smooth and clean without jagged edges or "stair-stepping" typical of most still pictures from video.



without AFI



with AFI

Cassettes: DVM30ME (30 minutes), DVM60ME (60 minutes)

Sony's double layered Metal Evaporated (ME) tape offers high signal output and has twice the remanent magnetic flux density of metal particle coatings for high performance. Plus a Diamond-Like Carbon™ protective layer for durability. Sony also offers cassette memory using an IC chip. So you can build a "Table of Contents" of the tape that can be accessed to automatically locate a particular "recording date" or "photo mode" segment.



DCR-VX1000 and DCR-VX700 only record in 12-bit mode but can playback both 12-bit (both stereo pairs) and 16-bit audio.

Stereo: Stereo sound playback requires the use of a stereo capable TV/monitor.

Direct Playback: On NTSC North American Standard TVs.

At comparable zoom ratios.

IEEE 1394 Draft 7.1y1.



process of sending programming from room to room.

Borrowing a page from the Channel

antenna distribution system will tap into the DSS signal.

If the system employs one DSS



Digital Handycam Camcorder Optional Accessories: **VCT-GP1** Shoulder Bracket with optional XV-M30 • **LCH-VX1000** Hard Carrying Case • **HVL-F7** Flash for Photo Mode • **HVL-20DW** 20-watt Light • **NP-720** Lithium Ion Battery Pack • **VMC-2DV** Digital Cable



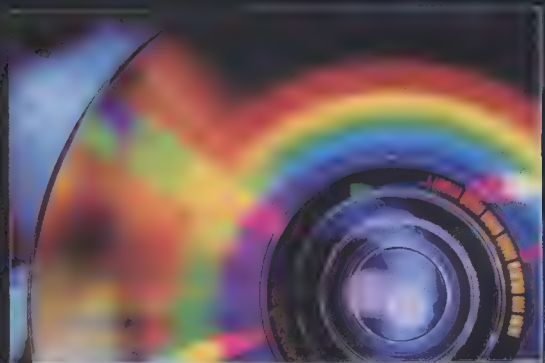
High-End Editing: The high quality video and audio delivered by the Digital Handycam camcorders makes professional editing a reality. Add the RM-E1000T and XV-D1000, and you have the ultimate editing suite.

Sony Style is your complete personal guide to Sony consumer electronics. To receive your copy for \$4.95, plus \$1.50 shipping and handling, call 1-800-848-SONY. Visa and MC. Offer expires 6/96.

devised a solution.

The problem was eventually traced to miscommunication between "enhanced"

DIGITAL SOUND



Nothing delivers high fidelity sound like digital technology. Just like compact discs, the DV format uses PCM (Pulse Code Modulation) recording, so you'll enjoy more than 96db of dynamic range.

With DV, there are two audio recording modes:

- 16-bit mode offers one pair of stereo tracks (Left and Right) and achieves up to the same quality as CD or DAT tape.
- 12-bit mode offers two pairs of stereo tracks (L1 & R1, L2 & R2) which allows you to add stereo music or narration to your on-location stereo sound.

DIGITAL INTERFACING



Of course with DV, your options don't end with recording. The DV In/Out means your data can be sent as a digital signal to other DV compatible equipment. So you can now edit multiple generations with virtually no deterioration of picture or sound quality. And since the DV In/Out interface supports the new proposed communications protocol (IEEE 1394⁵), direct digital linking with computers will be possible in the future.



process of sending programming from room to room.

Borrowing a page from the Channel

antenna distribution system will tap into the DSS signal.

If the system employs one DSS



Digital Handycam Camcorder Dealer Locations

ARIZONA

CAMELBACK CAMERA

Phoenix

FOOT FORUM

Phoenix

RICK'S TV

Show Low

ROH'S

Tucson

SOUND BANK

Lake Havasu

CALIFORNIA

ANDERSON'S

Redwood City

AUDIO VIDEO CITY

Guiver City, Santa Monica

BEL AIR CAMERA

Los Angeles

BOOT'S CAMERA

Fresno

GALE'S CAMERA

Gosta Mesa

GANOGA CAMERA

Ganoga Park

CONVOY AUDIO/VIDEO

San Diego

BROWN CAMERA

Redding

Learn more about the new Digital Handycam camcorders at Sony's World Wide Web Site at <http://www.sel.sony.com/SEL/consumer/camcorder/dv.htm>

© 1995 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited. Sony, Handycam, Digital Handycam, SteadyShot, ReadyCharge, DV logo and Diamond-Like Carbon are trademarks of Sony.

SONY

One Sony Drive
Park Ridge, NJ 07656

EBER ELECTRONICS

San Francisco

ERY'S ELECTRONICS

All Locations

GASSER'S

San Francisco

GLUSKINS CAMERA

Stockton

KEEBLE & SHUCHAT PHOTO

GRAPHY

Palo Alto

MEADOWS CAMERA

Stockton

REFERENCE AUDIO VIDEO

Gardena

SAMY'S CAMERA

Goleta, Los Angeles

SHERMAN OAKS CAMERA

Sherman Oaks

THE GOOD GUYS

All Locations

VIDEO ONLY

All Locations

WESTCHESTER TV

Bakersfield

DOLORADO

MIKE'S CAMERA

Boulder

ROBERT WAXMANS

Denver

CONNECTICUT

NOBODY BEATS THE WIZ

Select Locations

FLORIDA

SARASOTA CAMERA

Sarasota

SOUND ADVICE

Miami

GEORGIA

WOLF CAMERA & VIDEO

Atlanta

ILLINOIS

ABT TV & APPLIANCE

Chicago

HELIX CAMERA

Chicago

INDIANA

LEHMAN ELECTRONICS

Fort Wayne

ROBERTS DISTRIBUTORS

Indianapolis

ISAH

STEINER ELECTRONICS

Lewiston

STEINLEYS PHOTOCHART SYSTEMS

Coeur D'Alene

IOWA

THE CAMERA CORNER

Davenport

TRAVISS A/V

Des Moines

KANSAS

WOLFE'S CAMERA

Topeka

MARYLAND

PENN CAMERA

Rockville

PROVIDE

Rockville

MASSACHUSETTS

NEWTONVILLE CAMERA

Newtonville

MINNESOTA

NATIONAL CAMERA

Minneapolis

SOUND CENTER

Minneapolis

MISSOURI

BROAD BROS

St. Louis

ROSCOE TV

Kansas City

MONTANA

ROCKY MOUNTAIN HIFI

Great Falls

NEBRASKA

HOCKBROOK CAMERA

Omaha

NEW JERSEY

CAMERA STOP

Medford

RANDS CAMERA

Toms River

RECORD SHOP

Cherry Hill

NEW MEXICO

THE CANDYMAN

Santa Fe

NEW YORK

B&H PHOTO

New York (Store Only)

BERGER BROS.

New York (Store Only)

J&R MUSIC

New York (Store Only)

NOBODY BEATS THE WIZ

Select Locations

OREGON

CAMERA WORLD

Portland (Store Only)

MAGNOLIA HIFI

All Locations

NELSON'S TV & RADIO

Klamath Falls

NW SONY ONLY

Portland

SHUTTERBUG

Salem

THE GOOD GUYS

All Locations

VIDEO ONLY

All Locations

PENNSYLVANIA

BRYN MAWR STEREO & VIDEO

Philadelphia

CAMERA SOUND

Philadelphia

GENESIS CAMERA

Bryn Mawr

HIFI HOUSE

Broomall

NEW YORK CAMERA

Feasterville

Tennessee

DURY'S

Nashville

TEXAS

COLONEL VIDEO

All Locations (Store Only)

ED KELLUM & SON

Dallas

RADIO LAB

Lubbock

VIDEO REVOLUTION

Tulsa

WOLF CAMERA & VIDEO

Dallas

UTAH

TV SPECIALISTS

Salt Lake City

VIRGINIA

CRUTCHFIELD

Charlottesville (Store Only)

LEE HARTMANN

Roanoke

PALACE RADIO & TV

Arlington

VIDEO DIRECT

Newport News

WASHINGTON

HUPPIN'S

Spokane

KENT VIDEO

Kent

MAGNOLIA HIFI

All Locations

THE GOOD GUYS

All Locations

VIDEO ONLY

All Locations

WISCONSIN

CAMERA CORNER

Green Bay

HALL TV

Milwaukee



**GIVE A YEAR OF
VIDEO!**

*Only
\$9.97*

XA02

SEND GIFT TO:

NAME

ADDRESS

CITY

SEND BILL TO:

NAME

ADDRESS

CITY

STATE

ZIP

COUNTRY

TELEPHONE

FAX

EMAIL

DATE

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME

DAY

MONTH

YEAR

TIME



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 483 MARION, OH

POSTAGE WILL BE PAID BY ADDRESSEE

VIDEO™

P O BOX 1981
MARION, OH 43306-2081



THE NUMBER

42

Total capacity, in gigabytes (GB), Toshiba expects for blue-laser-read SD-DVDs.

could be simulcast to complement a televised sporting event. A special online offering could be simulcast to enhance a TV show. Or a broadcast system could be used as a download engine for bulk data—an MPC, for example, could receive big-bit A/V clips overnight.

DirecTV plans to launch a multimedia service that'll provide programming for MPCs. And computer hardware companies are discussing the possibility of building a DSS receiver into MPCs.

—Marjorie Costello

sky patch

Owners of Sony's SAS-B1 and SAS-BD1 DSS systems reported seeing numerous freeze frames and green streaks when watching DSS programming over a roughly 4-week period beginning in mid-August. Though Sony said the freeze frames and artifacts were confined to only 2.5 percent of all Sony DSS systems that had been sold, they stopped shipping the two systems to retailers for several days in early September while they researched the problem and, along with engineers from DSS programmers DirecTV and USSB,

devised a solution.

The problem was eventually traced to miscommunication between "enhanced" DSS signals and the MPEG decoder employed by the receiver in the two systems, according to Sony. The "enhanced" signals appeared to be upgraded MPEG-2 signals, which DirecTV and USSB were phasing in at the time. Though the decoders are essentially MPEG-2-compatible, a software code was required to clarify decoding protocols. In an unprecedented move, DirecTV and USSB began transmitting the code as a corrective "patch" via their satellites during the week of September 11.

At presstime, there was no word whether the patch had been successful. But an official Sony press release noted the company's "confidence



in this innovative solution," adding that as a result of their confidence the warranty on all Sony DSS units sold through the end of 1995 would be extended to 1 year parts and labor.

—Bill Wolfe

room service

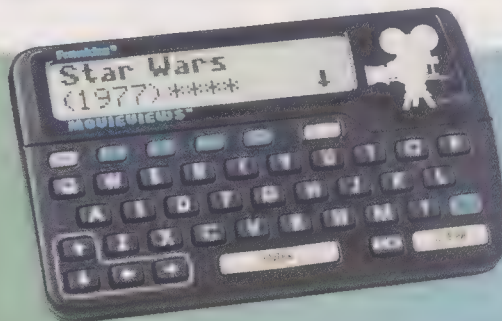
Nothing makes a home-theater system sound ordinary faster than a bad listening space—no matter how much you've spent on the components. If your living room is acoustically challenged, Snell has just the thing for you: The RSC 1000 Digital

Room Correction System, which uses digital signal processing (DSP) to correct for acoustic anomalies in even the funkier of rooms. How do it know? A calibrated microphone measures the way in which up to six speakers interact with the room. Using this data, the unit employs proprietary digital technology to correct for amplitude and phase problems. But there's one catch: The RCS 1000 is for home theaterphiles only, running a princely \$18,000.

—MH

viewmaster

You're out to dinner and you need to settle a bet. You're sure the cast of *Alice Doesn't Live Here Anymore*, Martin Scorsese's 1974 slice-of-American-life, includes longtime Scorsese favorite Harvey Keitel. Your friends disagree, and you're itching to prove them wrong—and pick up a free meal in the process. Your best bet: Just reach into your pocket or purse and pull out MovieViews, a pocket movie guide from Franklin (800.762.5382) that stores vital information on over 5,000 films.

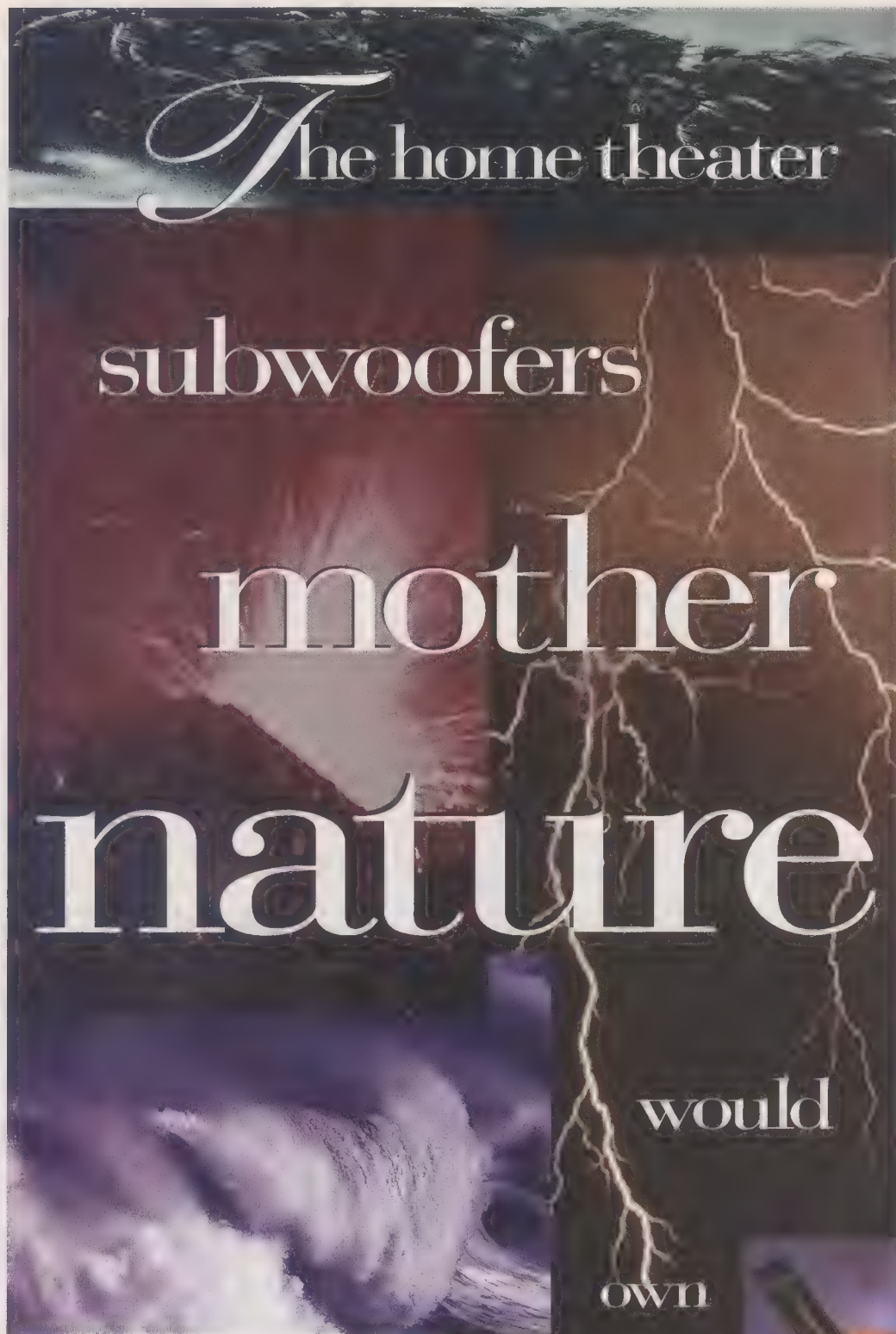


Not much larger than a credit card, MovieViews (\$50) is powered by an integral lithium battery. A mini keyboard lets you search for films by title, cast, director, MPAA rating, Academy Award winners, year of initial release, or theme; cursor keys let you scroll through the listing for a film, which includes cast and director details plus

a plot synopsis. The downside: MovieViews can't be updated as new films are released.

But that won't stop you from collecting on your bet. By the time you've punched in "Alice D" on MovieView's mini keyboard, it's found the film, and you've proven that the cast does indeed include Keitel. Time to send for the wine list.

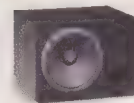
—MH



They make big screen TV huge.
Part of the audience? With Cerwin-

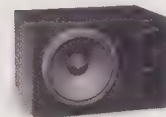
Vega SenSurround, you're part of the action. Six home theater subwoofers (two of which have internal power amps and remote volume controls). Deep bass? Down to 30 Hz. Power handling? Up to 300 watts. Television, for your ears. **SENSURROUND® from CERWIN-VEGA!**

PASSIVE SUBS



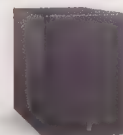
The HT-10D

10" DUAL VOICE COIL SUB. FOR SMALLER ROOMS. ACOUSTICALLY MATCHES OUR HT-S5 SATELLITES.



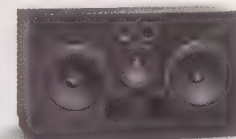
The HT-12D

12" DUAL VOICE COIL SUB. IDEAL MATCH FOR OUR HT-MDC OR HT-S6 SATELLITES. 150 WATTS/VOICE COIL.



The HT-110

10" SUBWOOFER. ACOUSTICALLY MATCHES OUR HT-S6 SATELLITES. SPL? 121 DECIBELS. BUCKLE UP.



The HT-210C

MAGNETICALLY SHIELDED. 125DB TV STAND. DUAL 10" SUBS. 6.5" CENTER CHANNEL. HANDLES 300 WATTS.

ACTIVE SUBS



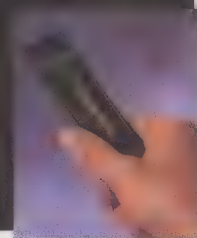
The HT-10PWR

10" SUBWOOFER. WITH 100 WATT INTERNAL POWER AMPLIFIER AND REMOTE VOLUME CONTROL.



The HT-12PWR

12" SUBWOOFER. WITH 150 WATT INTERNAL POWER AMP AND REMOTE VOLUME CONTROL. KABOOM!



©1995 Cerwin-Vega, Inc. All rights reserved. For more info on Cerwin-Vega® please write to us at 555 East Easy Street, Simi Valley, CA 93065. Or call 805-584-9332.

SenSurround® is a trademark of MCA Systems, Inc. **AWARDS?** Cerwin-Vega SenSurround subwoofers and systems won Design and Engineering Awards in 1993, 1994, and 1995. (The audience...is cheering.)

CIRCLE NO. 9 ON READER SERVICE CARD

Toshiba's family of SD DVDs pushes the technology envelope

THE BIG ONE

EVERY NOW AND THEN, TECHNOLOGY radically shakes up the world, forever changing the consumer landscape and the way in which we live. Consider how altered our reality would be without such wonders as the microprocessor chip or geostationary satellites. But it's still difficult to determine exactly how big any given techquake and its aftershocks will be. The introduction of the CD, for example, measured an eight on the Richter scale. But the launch of the DCC format was only a one (most people, in fact, slept through that mild disturbance).

All of which brings us to the digital videodisc (DVD). After seeing the technical specifications, I'm forecasting that this will be The Big One.

DVD should prove to be a monster storage device for movies, multimedia programs, and music. It will eventually prove to be superior to all existing consumer formats in terms of performance and capacity. It will be more convenient and more durable than tape. And I expect that it'll seriously challenge the CD within 10 years. Think about a single disc—and a single player, of course—that can spin movies and music albums with images and sound that surpass anything you've seen or heard before. That's DVD. Nothing is simple in the technology marketplace, of course, and that happens to go double for DVD.

In addition to all of the usual engineering and manufacturing hurdles, the format has already spawned one of the most complex corporate ballets ever. The Sony/Philips forces and the Toshiba forces have proposed similar but incompatible DVD formats (MMCD and SD, respectively), and they've danced circles around the question of head-to-head confrontation or cooperation. Reports

from a huge industry convention in Berlin suggest that the MMCD/SD fight may turn out to be less confrontational than the recent Tyson-McNeeley fight, in which Mr. McNeeley lasted about half as long as the "Star Spangled Banner." In fact, the prospects of a single unified format are burning brighter every day.

Whether there's war or peace, we expect to see players in one or two DVD formats on shelves sometime in 1996. And in terms of sheer performance, we have every reason to be very excited, as

DVDs are cut, also laserdisc-like, with constant linear velocity (CLV).

On a microscopic level, SD-DVD uses a track pitch of 0.74 μm , and the minimum pit/land length is 0.4 μm ; these dimensions are about half that of the music CD and similar to those of the MMCD. The SD-DVD also specifies a lens with a numerical aperture of 0.6; this is close enough to the MMCD's lens, which has an NA of 0.52. Also like the MMCD, the SD-DVD stores hours and hours of high-quality digital video and multichannel digital audio, but, unlike MMCD, it can do so on either one

or both sides of the disc.

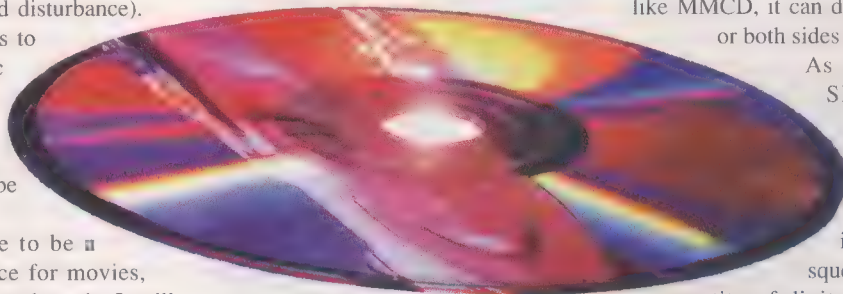
As with MMCD, the SD-DVD employs MPEG-2 data coding to perform data reduction.

Digital processing is required to squeeze the vast quantity of digital data that represents the original video/audio file—which may comprise 300 GB or more—onto one small disc. Fortunately, a good coding algorithm enables MPEG-2 to perform its squeezing act with very modest degradation.

MPEG-2, unlike the MPEG-1 process used with Video CDs (and, with increasing frequency, in multimedia applications), is a smart coding method. It allows a variable bit rate in which the flow of data depends entirely on the signal's demands. A complex, rapidly changing picture requiring high resolution, for example, would receive a high bit rate, whereas a simple low-resolution picture that was static would demand and receive far fewer bits. In this way, bits are used more efficiently, effectively saving them for the most demanding signals. Bottom line: SD-DVD is advertising a picture resolution of 720 x 480 pixels, and in early auditions industry experts have given it high marks for pic-

our examination of Sony/Philips' MMCD-type DVD ["Digital Reality," October 1995] proved. A close look at Toshiba's Super Density Digital Video Disc (SD-DVD), and their family of SD discs, only adds fuel to the fire.

AT FIRST GLANCE, THE SD-DVD SEEMS very familiar. It looks like an MMCD and a CD, being the same size (120 mm) and thickness (1.2 mm). But SD discs are actually comprised of two 0.6-mm-thick discs bonded together—like the laserdisc—on the data-pit side; the reading laser's light travels through half the substrate thickness as in a regular CD. Toshiba engineers point out, correctly, that a thinner disc is advantageous because it's inherently more resistant to errors that result when a disc is slightly tilted relative to the laser pickup. Data is placed on the disc surface over a diameter from 48 to 116 mm, with lead-in and lead-out areas before and after it. SD-



ture quality. The format also provides for both 4:3 and 16:9 aspect ratios. Furthermore, Toshiba and their format partners—including Time Warner, Thomson, Matsushita, Hitachi, and several Hollywood movie studios—are committed to supplying both NTSC (United States and Japan) and PAL (Europe and South America) discs and players.

The choice of audio coding for SD-DVDs is slightly surprising—Dolby Surround AC-3 will definitely be used for NTSC discs, but MPEG-2 audio coding will be employed for PAL discs. The overall MPEG-2 structure allows for either method, and the decision to embrace both audio formats was probably politically motivated, based on local favoritism. In any case, the format supports 5.1-channel digital audio with a bit rate of 384 kbps.

An interesting wrinkle is that each disc will have the capacity to hold *three* independent 384-kbps audio channels. Theoretically, an SD-DVD could store its soundtrack in three different coding schemes—two channels could use AC-3 and MPEG-2, for example, and a third could use a maverick format such as DTS or Sony's SDDS.

Also somewhat surprising, but entirely welcome, is the decision to specify an SD disc that has high-quality linear PCM audio tracks. This stereo disc format, which Toshiba calls SD-Audio, will offer sampling rates of either 48 or 96 kHz and word lengths from 16 to 24 bits. Audiophiles with a technical bent will realize that this is a theoretical dream come true—basically, it doubles the music CD's sampling rate and increases maximum word length by 50 percent. All the technically challenged need to know is that SD-Audio should be an improvement over the best CDs you can buy today. In terms of sheer performance, therefore, music aficionados may feel compelled to upgrade to SD-Audio. And if everything turns out alright, you'll be able to use one SD player to spin high-quality movie *and* audio discs.

The SD-DVD accommodates up to eight language tracks and up to 32 subtitle texts. Subtitles have a resolution of 720 x 480 pixels and are compressed with run-length coding. Because these channels can also be used for simple graphics, they're sometimes called "subpicture" channels.

Another interesting feature of SD-

DVD is its ability to store multiple camera-angle and story functions. This allows program producers to include various scenes, images, and camera angles, and the user can interactively choose which to view. Up to nine different camera angles can be coded, for example. In addition, SD provides a lockout-type option so that parents can keep kids (or grandparents) from getting into programs that may not be good for them.

When all is said and done, SD-DVD will support a maximum data rate of 10.8 Mbps, including video, audio, and some header information. In comparison, the MMCD's maximum rate is 11.2 Mbps. On the other hand, the SD-DVD's average bit rate is about 3.5 Mbps, while the MMCD's average rate

Eight-to-fifteen modulation records 1.2 times more data than EFM Plus in the same data area.

is 3 Mbps. A two-sided SD-DVD has a total capacity of 10 GB, while the single-sided dual-layer MMCD has a capacity of 7.4 GB.

These differences can be interpreted in at least two different ways. Sony and Philips say that because their coding is so efficient, they don't need the extra bits. Toshiba says "bits is bits," and because they have more of them available every second, they can provide higher quality signals. Everything else being equal, Toshiba's position seems more logical. Bottom line: At an average rate of 3.5 Mbps, the SD-DVD is said to surpass the picture quality of a laser-disc. And at that average rate, one 5-GB side of an SD-DVD can hold 142 minutes of programming.

Now I said "everything else being equal," but everything else isn't equal. The MMCD uses variations on the CD's CIRC error-correction code and its eight-to-fourteen modulation (EFM) code, called CIRC Plus and EFM Plus, respectively. As with CIRC and CIRC Plus, the SD-DVD uses a Reed-Solomon code for error correction; here, however, the code is known as RS-PC (Reed Solomon-Product Code).

RS-PC uses two interleaved correc-

tion codes, C1 and C2, which can be decoded multiple times to improve performance. Toshiba engineers claim that RS-PC will prove to be superior to CIRC Plus in read-write applications because of the limited (32-kB) data area over which RS-PC operates; the larger CIRC Plus areas, they say, will make it difficult to deal with random write errors. Sony and Philips disagree, of course.

Similarly, the SD-DVD beefs up the standard EFM specification, creating the eight-to-fifteen modulation code. In 8-15 modulation (I guess we shouldn't call it EFM), 8-bit words are converted to 15-bit recording data using conversion tables, with a minimum run length of 2 and a maximum run length of 12. An analysis of modulation codes isn't trivial, and it's difficult to compare 8-15 to EFM Plus. But that hasn't stopped Toshiba's engineers, who feel that 8-15 is the better choice because it can record 1.2 times more data than EFM Plus in the same disc area. Other factors, such as error correction and data clocking, make this a complex and very debatable issue, however, and it wouldn't be wise to draw conclusions unless you did some pretty detailed analysis.

That'd be possible only if the two formats don't merge, so I hope we never get the chance to compare the two methods—though it'd be nice to know which was superior if a merger were pending so that we could press for it to be included. Why wouldn't the superior method be included automatically? Because a DVD merger would be big business, and cooperation at this level always includes compromises and give-and-take.

THOUGH THE EXACT DETAILS ARE still sketchy, Toshiba envisions an entire family of super-density formats, including SD-DVD, SD-Audio, SD-ROM (doing for the CD-ROM what SD-Audio may do for the CD—that is, surpass it), and SD-R (write-once) and SD-RAM (phase-change rewritable) recordable DVDs. SD-DVD would store video and audio material, SD-Audio would store audio only, and SD-ROM, SD-R, and SD-RAM are intended mainly for computer applications—though SD-Rs could be used for recording movies, TV shows, and other A/V programming. Because the family members share the same file format,

there is compatibility between family types.

In all of these formats, SD data is recorded in a basic recording unit called a sector. Each sector holds 2,048 kB of data along with header information and error-correction data. All SD family members will adhere to the OSTA (Optical Storage Technology Association) file system or the Micro-OSTA format, both of which are based on the ISO 13346 standard and govern how data is stored on digital media. This helps ensure compatibility among many computer platforms. In addition, SD-DVD, SD-Audio, and SD-ROM will also adhere to the ISO 9660 file format, a widely used means of representing data in computer applications.

Various types of SD discs are denoted by their storage capacity. SD-5, SD-9, SD-10, and SD-18 are all envisioned, with subindexes declaring their capacity. SD-5 is the basic, single-sided single-layer type, with a manufacturing cost that's pretty close to that of the CD (it'd be 14 percent more expensive than the CD, to be exact). An SD-5 disc is very much like a regular CD. The main technical difference is that, in a CD, the reflective data layer is at the top of the 1.2-mm substrate; in a SD-5, the layer is at the top of a 0.6-mm substrate, with another 0.6-mm substrate applied above it for protection and rigidity. Toshiba estimates that 96.6 percent of all Hollywood movies could fit on a single SD-5 disc, which can hold 142 minutes of better-than-laserdisc programming.

SD-9 is a single-sided double-layer disc, and both layers can be read without disc flipping, laser skating, or the use of two laser pickups. With SD-9 discs, one 0.6-mm substrate is formed and its data layer is covered with a reflective aluminum layer. Then a second 0.6-mm substrate is formed, but its data layer is covered with a semi-reflective material. A UV-hardening resin is placed on the semi-reflective layer, the first substrate's data layer is pressed against it, and a UV light is shined on the disc to bond the substrates together. (This is similar but not identical to Sony/Philips' MMCD; Toshiba says the SD-9 is less expensive to manufacture than the dual-layer MMCD, since the MMCD's second data surface must be pressed into the internal resin before it's hardened.) The reading laser's light can be focused on either of the SD-9's

data layers (they're only about 40 μ m apart) by simply moving the objective lens—a simple bit of engineering that, in practice, can be switched in a matter of milliseconds. Because the SD-9's construction particulars slightly reduce reflectivity, overall storage capacity is slightly reduced—down to 4.5 GB per layer from 5 GB.

SD-10 is a double-sided disc, with one layer per side. Two 0.6-mm-thick substrates are bonded together and read from opposite sides of the disc. The disc would have to be manually flipped, the player's laser would have to skate around to the second side after it was done playing the first side, or they'd have to build in two laser pickups; clearly, the first and third options in-

crease the cost of the player. The SD-10 could be used for longer films or for adding "supplemental" material relevant to the film, such as interviews with the director or stars, outtakes, original trailers, the movie's screenplay, or videogames.

Finally, the SD-18 disc is a double-sided double-layer disc in which two different 0.6-mm substrates are bonded together and read from opposite disc sides—providing a total of four data layers. Toshiba also envisions single- and double-sided SD-R discs, holding 4 and 8 GB, respectively, as well as single- and double-sided SD-RAM discs, holding 2.6 and 5.2 GB, respectively.

SINCE TOSHIBA HAS FIXED THE SD FAMI-

WEB WATCH

I know, it's only rock and money roll

IF YOU SURFED THE NET IN THE OLD DAYS, YOU'LL RECALL THAT YOU NEVER HAD to dodge ads of any kind—because there weren't any. Netiquette forbade any kind of selling or promoting, and anyone who broke the rules got severely flamed. Oh, how times have changed. Today, the Web is swimming in thinly veiled commercialism—and, ironically, for all its rebel roots, rock-and-roll is at the heart of it.

I've never visited Cleveland, and most people I know haven't either. The Rock and Roll Hall of Fame was built to change that, by luring tourists to town. The Hall's web page (<http://www.rockhall.com>) lets you visit the museum virtually, read about its exhibits, rummage through its archives, and listen to brief soundbites and historical narratives from the top 500 songs that shaped rock-and-roll. The site is kind of boring, actually, and pages from Mobil and Fodor's travel guides don't stir things up much.

Though it's the ultimate in crass commercialism, Molson's site (<http://www.molsonice.com/>) is pretty cool: It'll let you check out the Labor Day concert at Tuktoyaktuk, a chilly place a mere 200 miles from the Arctic Circle (it definitely isn't mentioned in Fodor's). You'll also find lots of information on new music and a collection of *QuickTime* "movies" you can download. Attempting to deflect any thoughts that selling beer is the only thing on their minds, Molson's conscientious execs also let you visit the Center for Marine Conservation.

If Rockhall is stale, Rocktropolis (<http://underground.net/Rocktropolis/>) is anything but. The Trop is a rock-and-roll theme park, and their net page promises that it's only a "prototype of things to come." After you choose a "bandwidth angel," you can wander through the Trop's surreal space; irritating text is in short supply, and fantasy graphics are plentiful. You'll need a Netscape browser to make sense of Rocktropolis—even with Netscape, you may have a tough time (I did). Commercialism occasionally rears its ugly head when, like a soldier stepping on a land mine, you click on a page with an 800 number for ordering rock-and-roll merchandise. Still, like most things in cyberspace, I don't understand Rocktropolis... but I like it.

—KCP



"Cambridge SoundWorks Home Theater For



For many speaker designers and manufacturers, home theater is a relatively new idea. But the people who work at Cambridge SoundWorks - including our cofounder Henry Kloss (who also founded AR, KLH and Advent) - have been involved with the concept of home theater from the beginning. In 1969 (years before VCRs and cable TV), Henry Kloss founded Advent, the company that introduced the first home theater audio/video systems - complete with big-screen TVs and digital surround sound. We have had an ongoing relationship with the people at Dolby Laboratories, creators of Dolby Surround Sound, since Henry Kloss introduced the first consumer products with Dolby noise

standard for home theater components.

Because we sell carefully matched and tested home theater speaker systems factory-direct, with no expensive middlemen, you can save hundreds of dollars. We believe the products on these pages represent the country's best values in high performance home theater components. Audio critics, and thousands of satisfied customers, agree.

Stereo Review said

"Cambridge SoundWorks manufactures loudspeakers



Our Surround Speakers

magnetically shielded so they can be placed near a TV or computer monitor. *Center/Surround IV* is a compact, one-way speaker identical to our *Ensemble® IV* satellite speakers. **\$49.99.** *Center/Surround III* is a small, affordable two-way speaker. **\$79.99.** *Center Channel* is identical to a Cambridge SoundWorks *Ensemble* satellite (but with magnetic shielding). **\$149.99.** *Center Channel Plus* uses an ultra-low, ultra-wide design that is ideal for placement above (or, with optional support stand, below) a TV monitor. **\$219.99.**

Surround Speakers

Cambridge SoundWorks makes two "dipole radiator" surround sound speakers. Dolby Laboratories recommends dipole radiator speakers for use as surround speakers. *The Surround* has a very high power handling capacity and is often selected for "high end" surround sound systems. *Audio*, describing a system that included *The Surround* said "In many ways the surround sensation was every bit as good as far more expensive installations." **\$399.99 pr.** The smaller *The Surround II* is arguably the country's best value in a dipole radiator speaker. **\$249.99 pr.**



Our Center Channel Speakers

reduction over 20 years ago. And now at Cambridge SoundWorks we believe we have set a new price-to-performance

that provide exceptional sound quality at affordable prices." *Audio* suggested that we "may have the best value in the world."

Center Channel Speakers

Cambridge SoundWorks manufactures four speakers for use as center channel speakers in Dolby Pro Logic home theater systems. All four are



Our Popcorn

Opens The Way To Killer An Affordable Price."

Stereo Review

Powered Subwoofers

The original *Powered Subwoofer* by Cambridge SoundWorks consists of a heavy-duty 12" woofer housed in an acoustic-suspension cabinet with a 140-watt amplifier and a built-in electronic crossover. *Stereo Review* said it provides "deep powerful bass...31.5 Hz bass output was obtainable at a room-shaking level... they open the way to having a 'killer' system for an affordable price." **\$799.99.**



Our Powered Subwoofers

Our *Slave Subwoofer* uses the same woofer driver and cabinet, but does not include the amplifier or crossover. It can only be used in conjunction with the *Powered Subwoofer*. **\$299.99.** The new *Powered Subwoofer II* uses a 120-watt amplifier with an 8" woofer. **\$399.99.**



Our Most Popular Home Theater Speaker System.

Home Theater Speaker Systems

We have assembled a number of home theater speaker systems that consist of center channel, surround and main stereo speakers. The combination we show here is our best seller. It includes our critically acclaimed *Ensemble* dual subwoofer satellite speaker system, our *Center Channel Plus* and a pair of our best surround speakers, *The Surround*.

You could spend hundreds more than its **\$1,219.97** price without improving performance.

Complete Home Theater Sound Systems

We offer a range of complete home theater surround sound systems, ranging from **\$649.98 to \$3,069.93.** The system shown here



Our Featured Home Theater Sound System

is incredibly easy to hook up and to use. It consists of an Aiwa center unit that includes a Dolby Pro Logic receiver, CD changer, dual cassette deck, remote control – and our *Ensemble IV Home Theater* speaker system. It sounds great, fits into any room, and sells for an introductory price of only **\$899.99.**

Factory-Direct Savings

The speakers in this ad are available only directly from Cambridge SoundWorks, and through cost-efficient Best Buy stores – so you can save hundreds of dollars. Order them, then listen in your own homes. If you aren't completely satisfied, return them within 30 days for a full refund.



To Order Factory Direct, For a Free Catalog, Or For The Nearest Store Location, Call
1-800-FOR-HIFI
(1-800-367-4434)



Critically Acclaimed. Factory-Direct.

311 Needham Street, Suite 130NOV, Newton, MA 02164
Tel: 1-800-367-4434 Fax: 617-332-9229
Canada: 1-800-525-4434
Outside U.S. or Canada: 617-332-5936

© 1995 Cambridge SoundWorks. REnsemble is a registered trademark of Cambridge SoundWorks, Inc. KLH is a trademark of KLH, Inc. AR and Advent are trademarks of International Jensen Inc. Cambridge SoundWorks is not affiliated with KLH, Advent or AR.



CIRCLE NO. 29 ON READER SERVICE CARD

CAMBRIDGE SOUNDWORKS BY HENRY KLOSS



FREE Audio Catalog

At Cambridge SoundWorks we make unique, critically-acclaimed speakers and music systems designed by Henry Kloss (founder of AR, KLH & Advent). We sell them—and components from companies like Sony, Pioneer, Philips, Carver and others—factory-direct, with no expensive middlemen. Call today and find out why *Audio* magazine said we may have “the best value in the world.”

- Call toll-free for factory-direct savings.
- Save hundreds on components and systems from Cambridge SoundWorks, Sony, Pioneer, AIWA, Harman Kardon, Philips, Carver and more.
- Audio experts will answer your questions before and after you buy, 8AM-Midnight (ET), 365 days a year—even holidays.
- 30-Day Total Satisfaction Guarantee on all products.
- 7-Year Parts & Labor Speaker Warranty.



“Best Buy.”
PC Magazine

Add our award-winning \$219.99 SoundWorks system to your computer, radio, TV, or Walkman for room-filling sound and powerful bass.

1-800-FOR-HIFI
Critically-Acclaimed. Factory Direct.

**CAMBRIDGE
SOUNDWORKS**

311 Needham Street, Suite 130 NOV, Newton MA 02164
Tel: 1-800-567-4434 Fax: 617-332-9229
Canada: 1-800-525-4434 Outside U.S. or Canada: 617-332-5936
©1995 Cambridge SoundWorks.

ly's major design criteria, work is proceeding rapidly on both SD hardware and software. According to Toshiba engineers, first-generation SD-DVD players will be able to read both single- and double-layer discs, though all first-generation discs will have a single data layer. In addition, first-generation players are being designed with an eye toward future compatibility with read/write SD-ROMs and SD-RAMs. Toshiba is also looking into higher density discs—possibly manufactured with a shorter wavelength blue laser. The company expects these discs to provide a monstrous 42 GB of storage! And the plan is for first-generation SD-DVD hardware to play them.

Because of its small pit/land dimensions, some critics have questioned whether even the basic SD-5 disc could be economically mass-produced with today's technology. When I asked a Toshiba spokesman about that, he verified that over 1 million single-layer SD-DVDs have already been manufactured by SD alliance manufacturing partners, with defect rates that are similar to those of the CD. Based on the success of this pilot production run, he says, pressing plants are scheduled to begin mass production later this year, with the goal of having 250 movie titles available when the hardware is launched in 1996 and over 750 titles available within a year of the launch. Laserdisc manufacturing, which also includes a bonding procedure, is mature enough to minimize worries about bonding problems—particularly “laser rot”—with SD discs.

ASK ANYONE WHO'S EVER WATCHED A movie at home whether they'd prefer one unified format or two competing formats, and they'll tell you that the two DVD camps should sit down, have a nice chat over a civilized cup of tea, and agree to pool resources to launch one DVD system. As the launch date draws near (both sides are aiming for June of 1996), the possibility of cooperation has seemed dim. But things are looking up.

The catalyst, interestingly, has been two reports issued by the computer industry's Technical Working Group. This group—representing such heavy-hitters as Apple, Compaq, Fujitsu, Hewlett-Packard, IBM, and Microsoft—urged the two camps to agree

on a common format and forgo a format war. And the two DVD camps appear to be listening.

How can the computer industry have this kind of impact? It's simple: The reality is that the swing to digital technology has essentially merged the computer and audio/video industries. When it became clear that a single family of discs could be used for all of these applications, it became an all-or-nothing proposition for the inventors of the DVD formats. And that's precisely the sentiment that underlies the computer industry's call for a single format.

At this writing, both Sony/Philips and Toshiba have acknowledged that sub-

First-generation players are being designed with an eye toward future compatibility.

stantive talks are being held to determine if a common format can be developed. From an engineering standpoint, it seems that slight modifications to either side's error-correction and modulation methods would result in compatibility with the other. The only real difference, therefore, lies in the optical readout. Because disc construction differs between the formats, it would be necessary to develop a laser pickup that could read either disc equally well or, preferably, drop one construction method in favor of the other. Early reports suggest that the common format may employ Sony/Philips' error correction and modulation, while everything else about the disc—including the basic disc construction—would follow the Toshiba design. But that has by no means been confirmed. One thing seems clear, though: If the negotiations extend well into the fall, DVD's launch may be pushed back from the June 1996 target date.

Will one DVD or two emerge? Previous talks didn't end with an agreement, so we shouldn't be overly optimistic. But there is hope. The economic reality, certainly, is that a single DVD format could be The Big One. The wisest plan would be to approach that ideal in a straight line. ■

GREAT MOVIE GIFTS AT A MERRY PRICE.

GIVE OR GET 6 MOVIES FOR 1¢ EA.

PLUS 2 MORE
AT GREAT SAVINGS.

GREAT
NEW OFFER!
JOIN TODAY!

See details below.



BORN TO BE WILD	1378801	THE RIVER WILD	1336304	GRUMPY OLD MEN	1251503	THE LAND BEFORE TIME II	1314103	THE COWBOY WAY	1292705
THE LAST SEDUCTION	1372507	TIMECOP	1332204	ACE VENTURA: PET DETECTIVE	1242908	FRIED GREEN TOMATOES	1005404	BRAM STOKER'S DRACULA	1102904
MURDER IN THE FIRST	1371103	THE CLIENT	1300409	THE ROAD TO WELLVILLE	1362102	SON-IN-LAW	1192301	WHAT'S LOVE GOT TO DO WITH IT?	1218007
BABES IN TOYLAND (DISNEY)	0530006	MARY SHELLEY'S FRANKENSTEIN (1994)	1363803	THE SHAWSHANK REDEMPTION	1345503	THE BODYGUARD	1105907	THE PELICAN BRIEF	1251305
BULLETS OVER BROADWAY	1374503	MAVERICK	1297209	SILENT FALL	1347806	DANCES WITH WOLVES	0805200	BLOWN AWAY	1291301
A FAR OFF PLACE	1376904	MRS. DOUBTFIRE	1221605	A SIMPLE TWIST OF FATE	1353309	THUMBELINA	1365909	RAIDERS OF THE LOST ARK	0910802
A LOW DOWN DIRTY SHAME	1370709	WOLF	1314905	THE SPECIALIST	1341700	WYATT EARP	1291400	THE SECRET GARDEN (1993)	1188804
READY TO WEAR	1379601			THE WAR	1352905	THE COLOR PURPLE	0630103	THE HUNT FOR RED OCTOBER	0825000
THE ROCKETEER	1377308			FERN GULLY: THE LAST RAINFOREST	1006808			LETHAL WEAPON 3	1051507
SAFE PASSAGE	1371707			THE FUGITIVE	1197705			CLIFFHANGER	1149301
BLUE SKY	1348606							LISSIE (1994)	1318609
CAMP NOWHERE	1353408							BEETHOVEN	1009901
DOUBLE DRAGON	1353606							IN THE ARMY NOW	1343706
ED WOOD	1366202							SCARFACE (1983)	0216804
EXIT TO EDEN	1348804							GHOST	0826008
FLIGHT OF THE NAVIGATOR	0544601							DIRTY DANCING	0495507
RICHELIE RICH	1353705							A FEW GOOD MEN	1106301
THE RETURN OF THE JEDI	1415900							IT COULD HAPPEN TO YOU	1332006
THE EMPIRE STRIKES BACK	1415801							THE BELLS OF ST. MARY'S	0404608

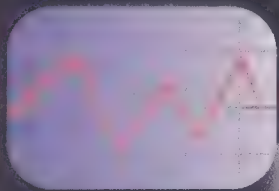
STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007
ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909
THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509
STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903
TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105
THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807
SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407
TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200
JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001
THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404
FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503
WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507
THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409
SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101
CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305
FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202
SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509
STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007
ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009
THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701

STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007
ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909
THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509
STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903
TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105
THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807
SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407
TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200
JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001
THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404
FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503
WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507
THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409
SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101
CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305
FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202
SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509
STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007
ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009
THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701

STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007
ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909
THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509
STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903
TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105
THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807
SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407
TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200
JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001
THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404
FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503
WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507
THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409
SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101
CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305
FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202
SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509
STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007
ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009
THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701

STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007	STAR WARS	1416007
ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909	ANGELS IN THE OUTFIELD (1994)	1374909
THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509	THE LITTLE RASCALS (THE MOVIE)	1333509
STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903	STARGATE	1334903
TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105	TRUE LIES	1327105
THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807	THE MASK (1994)	1318807
SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407	SPEED	1297407
TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200	TOMBSTONE	1254200
JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001	JURASSIC PARK	1264001
THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404	THE WIZARD OF OZ	0001404
FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503	FREE WILLY	1147503
WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507	WHEN A MAN LOVES A WOMAN	1310507
THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409	THE SOUND OF MUSIC	1277409
SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101	SISTER ACT 2	1268101
CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305	CLEAR AND PRESENT DANGER	1326305
FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202	FORREST GUMP	1333202
SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509	SPEECHLESS	1352509
STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007	STREET FIGHTER	1384007
ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009	ANDRE	1335009
THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701	THE JUNGLE BOOK (1994)	1374701

THE MATOR (1994)	1297407	(THEATRICAL VERSION)	1341205	RODDY THE RED-NOSED REINDEER	0801704	8 SECONDS	1278704	DEATH AND THE MAIDEN	1384809
SPEED	1297407								
TOMBSTONE	1254200	LOVE AFFAIR (1994)	1349109	FROSTY THE SNOWMAN	0801902	GREASE	0207407	DEMON KNIGHT:	
JURASSIC PARK	1264001	MILK MONEY	1330307	A CHRISTMAS CAROL	0271007	BEETHOVEN'S 2ND	1241504	TALES FROM THE CRYPT	1372200
THE WIZARD OF OZ	0001404	NATIONAL LAMPOON'S		BROOKLYN TABERNACLE		THE SHADOW	1297001	DROP ZONE	1364306
FRFF WILLY	1147503	ANIMAL HOUSE	0211508	CHOIR: LIVE HE'S		SISTER ACT	1071208	HIGHER LEARNING	1381805



VIDEO TEST SPECIAL

TOSHIBA

POWER

EJECT

VIDEO

LINE IN 2

13 MONO AUDIO

R

REC

4 HEAD
Hi-Fi STEREO

Panasonic

PV 4562

POWER

VIDEO IN 2 L-AUDIO IN 2-R

Dynamic HS

DynAmorphous

ICVT

PLAY

VCR

SONY

POWER

EJECT

Hi-Fi Stereo

4 HEAD 4 HEADS 4 HEADS 4 HEADS 4 HEADS

TV/VT

910

8.19.45

2

VIDEO CASSETTE RECORDER

TALE OF THE TAPE

TEST
813

THERE'S NO DOUBT THAT THE VCR has become a fixture in American households. Many people take them for granted, viewing them as just another appliance in a home full of electronic wonders. Conversely, comedians *still* like to make fun of their complexities, especially in regard to programming them for time-shift recording. Neither perspective is really relevant to today's VCR, though. As we discovered in this test, VCRs are easier to use than ever, but there are significant performance differences between models in a common price range.

For starters, something in the neighborhood of \$300 will net you a relatively feature-packed VCR with Hi-Fi audio—a must for any model that's destined to be used in a home-theater system, where soundtrack reproduction is critical to the system's overall effect. VHS Hi-Fi's sound quality is excellent indeed, residing several notches above the analog audio cassette and just a notch below the CD. And practically every movie you'll find at your local rental shop carries stereo or surround Hi-Fi audio tracks. Play one on a well designed home theater and the results will be thrilling.

A \$300 VCR also offers plenty of conveniences—features that truly make the deck more useful and easier to use. The VCR Plus+ system makes time-shift programming a simple matter of entering a multi-digit code (after you've completed an initial, one-time setup procedure). Cable-box control methods let a VCR time-shift multiple cablecasts in your absence. The clock in some VCRs sets itself automatically—and automatically resets itself twice a year for Daylight Savings Time, guarding the integrity of your time-shift commands and preventing the dreaded flashing “12:00” in the deck's display—when your local PBS station broadcasts this information as part of its vertical blanking interval.

**10 affordable
Hi-Fi VCRs tested
and compared**

BY CLIFF ROTH

PHOTOGRAPH BY JIM SLOAN



Four Horsemen: Fisher FVH-4914, Sharp H942U, Hitachi VT-F392A, Optimus Model 59. **Overleaf:** Toshiba M-661, Panasonic PV-4562, Sony SLV-740HF.

Most VCRs in this price range come with a universal remote control, which is capable of operating other brands of TVs and cable boxes. Some VCRs even have jog/shuttle controls, simplifying the process of finding specific spots on a tape; sometimes you'll find them on a deck's front panel and on its remote (though many offer slightly less useful shuttle-only lookalikes). And picture quality, even at this relatively affordable price, approaches the ceiling of the standard VHS format.

To get a fix on what \$300 or so can buy in terms of features, ease of use, and performance, we assembled a cast of 10 VCRs from major manufacturers and put them through their paces both in the lab and in a home-theater system. Manufacturers who accepted the invitation to participate were given only two stipulations when deciding which of their models to send—the VCR had to have a Hi-Fi audio section, and its suggested retail price had to fall between \$300 and \$400. The cast includes Fisher's FVH-4914, GoldStar's GVR-E468,

Hitachi's VT-F392A, JVC's HR-VP624U, Optimus' Model 59, Panasonic's PV-4562, Samsung's VR8805, Sharp's H942U, Sony's SLV-740HF, and Toshiba's M-661.

We discovered plenty of differences among these VCRs. But there are similarities as well. All but three of the models delivered very good to excellent sound quality, for example, and even the exceptions to this rule did reasonably well. All of the VCRs offered a number of what, by extension, we must consider standard features, including four video heads, still-frame and slow-motion playback, frame advance, and auto rewind.

As mentioned, our test procedure involved both technical measurements and actual in-system evaluations. Technical editor Lance Braithwaite recorded a series of standard video test patterns on the VCRs, using JVC's base-grade SX blank tape for all. Test patterns included color bars, a yellow field, multi-burst stripes (six sets of vertical lines representing 0.5, 1, 2, 3, 3.58, and 4

MHz), a video sweep (which increases frequency from the top to the bottom of the screen), cross hatch, dots, and resolution. The tapes were played back simultaneously in two groups of five VCRs. We used JVC's JX-S900 A/V selector, connected via identical, 6-foot-long Phoenix Gold EVC-2 A/V cables, to switch between them and compare the test patterns. For viewing, we used Sony's PVM-2530 broadcast-grade Trinitron monitor (which was first adjusted using the *A Video Standard* test laserdisc spinning in a Pioneer CLD-D703). Winners in this initial round then slugged it out in A/B comparisons for top ranking.

To see how the VCRs performed with ordinary prerecorded movies, I also took a look at several scenes from Albert Brooks' *Defending Your Life*. This film isn't particularly noteworthy in terms of performance, but it happens to be one of my all-time favorites, so I can watch it again and again without losing my mind. As expected, differences were less noticeable here—though they were still visible.

In ranking the VCRs, I was looking primarily for the best picture quality. But to help distinguish between similar performers, other factors were weighed—overall ease of use, the swiftness of search speeds, still-frame quality (I rated the quality of the picture when the VCR was paused), even front-panel styling. And they're off!

FISHER FVH-4914

The FVH-4914 (\$330) is fairly light on features. VCR Plus+ and cable-box control aren't on tap. The remote control is well designed, however, with a big PLAY button and a shuttle dial that offers two rapid-search speeds—a relatively slow 5X at SP and a relatively quick 27X at EP are the maximums (the front panel doesn't offer the shuttle). Another button on the remote triggers the slow-motion function. Rewind time for a T-120 tape was comparatively slow, clocking in at 3:45.

The 4914 has a confusing menu system—after I selected my preference for English-language instructions, it automatically initiated channel search, which took several minutes and could only be canceled by turning the VCR off. While this may prove handy for technophobes, it literally took the ball out of my hands.

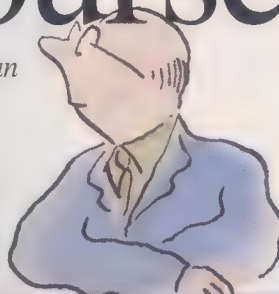
Test patterns showed that the 4914 had trouble with picture detail: Hori-

We couldn't have said it better ourselves.

— excerpts from *Audio Magazine*, by Anthony H. Cordesman

"...this is a product that deserves attention."

"This is the kind of product that shows the best of the high end can be made truly affordable."



"In short, the Adcom GFA-5800 stands out even in a world where almost all amplifiers now sound good."

"You may be surprised to find out how good your speakers are when you first try an amplifier of this quality."

"It is also a little difficult to believe that this amplifier is in the \$1500 price range."



"It does everything exceptionally well for its price, and its upper midrange and treble and overall musicality are hard to find in any amplifier not costing at least twice its price range."

"The imaging, soundstage, dynamics, and transparency of the Adcom GFA-5800 had the kind of realism and integration I only expect to find in far more expensive products."

"Just as Adcom once changed the standards of the power amplifier market with the 555, it has introduced a new product that may similarly change the market again."

The Adcom GFA-5800 amplifier is quite possibly the best amplifier you may ever hear. We know it sounds better than others selling for more than twice its price. Delivering 250 watts continuous per channel into 8 ohms between 20 Hz and 20 kHz, its circuit design and component specifications are in a class by itself.

But you don't have to take our word for it. Send us your name and address and we will send you a reprint of *Audio*'s review as well as detailed literature. Or better yet, simply ask to listen to the GFA-5800. Your ears will tell you all you need to know.

ADCOM[®]
details you can hear

11 Elkins Road, East Brunswick, NJ 08816 U.S.A. (908) 390-1130.
Distributed in Canada by PRO ACOUSTICS INC. Montréal, Québec (514) 344-1226
CIRCLE NO. 1 ON READER SERVICE CARD

☐ Send me *Audio*'s review and detailed literature on the Adcom GFA-5800.

Name

Address

City State Zip

✂ **Mail to:** Adcom, 11 Elkins Road, East Brunswick, NJ 08816 U.S.A.

CUT ALONG DOTTED LINE

© 1995 ADCOM

zontal resolution was just 220 lines at both SP and EP. Picture-noise levels were respectably low, however. This probably reflects a conscious design decision—noise can be reduced by filtering out high-frequency picture information. Unfortunately, this type of filtering reduces fine picture detail.

A lot of rainbow shimmering was visible in the resolution and multiburst test patterns, indicating inadequate comb filtering. Still frames looked very jittery at SP speed, though they were slightly better at EP; in both cases, however, a double image that resembled a vertical ghost was evident.

GOLDSTAR GVR-E468

The GVR-E468 (\$340) looks fairly ordinary, though its basic transport controls aren't unified: The PLAY button is built into a mock-shuttle arrangement of fast-forward and rewind buttons on the right side of the front panel, while the stop/eject button is on the left. But the remote control is excellent: It's compact, has a true jog/shuttle dial, and includes glow-in-the-dark transport-control buttons. A quibble: You have to press a special button to activate the jog/shuttle. A more significant annoyance: You have to press and hold the fast-wind buttons during playback to get truly speedy rapid-search speeds (9X in SP, 27X in EP); if you just press one of these buttons momentarily, rapid search just isn't rapid enough (5X in SP, 15X in EP). The E468 is the only VCR in this group to offer true double-speed playback, though you get it without sound; there's also a time-search function. It was way up there in the tape-rewind heat, clocking in at 2:20. VCR Plus+ is part of the feature package, but cable-box control isn't.

The E468 put up mixed numbers, ultimately landing it in the lower-middle of the pack. While resolution was very good at both SP and EP, the chroma-noise figures were mediocre at SP and poor at EP—the yellow field and color bars really didn't look good at the slow speed. Still-frame quality was pretty good, though a bit of noise was visible near the top of the frame at SP; it was fine at EP.

HITACHI VT-F392A

The VT-F392A (\$349) scores high on the convenience-feature meter. In addition to auto clock setting, you get VCR Plus+ and 60-second commercial skip, but not cable-box control. Alone in this



Three's company: Goldstar GVR-E468, JVC HR-VP624U, Samsung VR8805.

group, the remote control has illuminated buttons—a real plus when you're watching tapes in a darkened room. Search speeds were on the slow side, however, clocking in at 5X in SP and 15X in EP. The T-120 rewind took a respectable 2:40.

Color distortion was severe, with the yellow-field test pattern appearing orange. This can be compensated for with a TV's tint control, but you'd have to readjust it when you switch back to another source, such as broadcast TV or cable; this may not be a huge hassle if your TV lets you store at least two different groups of picture-control settings. There was also quite a bit of chroma noise in the yellow field at EP; SP performance was better. Resolution was noticeably worse than that of most other models at SP. But the comb filter seemed better than average—though there was some rainbow shimmering in the multiburst pattern, it wasn't as bad

as with some other models. Still frames were torn at SP speed, but they looked much better at EP.

JVC HR-VP624U

If looks could kill, the HR-VP624U (\$399) might be worthy of a year-long trial on Court TV. It has a unique amber-colored display (amber is big in car-stereo circles) and an attractive metallic-purple finish. The display includes a counter, but lacks motion indicators—you have to activate the on-screen display to see if the VCR is rewinding, for example. The 624U offers VCR Plus+, cable-box control, and 30 to 120-second commercial skip. The rear panel features a simple remote-pause edit-control jack for use with a camcorder; the only other deck that features any edit provisions is the Sony.

Maximum search speeds measured 7X at SP and 27X at EP. To slow things down, the remote offers the unusual

The Client	*1300409
The Making Of Jurassic Park (Special Edition)	1372606
The Specialist	*1341700
Ace Ventura: Pet Detective	*1242908
Grumpy Old Men	*1251503
Pink Floyd: The Wall	*1293802
Rambo: First Blood	*0650309
The Sound Of Music	*0003905
Unforgiven (1992)	*1084003
Blown Away	*1291301
The Pelican Brief	*1251305

CLUB FAVORITES

Jurassic Park	*1264001
Legends Of The Fall	*1371301
Priscilla Queen Of The Desert	*1345206
Mary Shelley's Frankenstein (1994)	*1363803
The Shawshank Redemption	*1345503
Stargate	*1334903
True Lies	*1327105
Terminator 2: Judgment Day	*0233205
Clear And Present Danger	*1326305
Speed	*1297407
Bladerunner: The Director's Cut	*1097906
The Fugitive	*1197706
Close Encounters Of The Third Kind (Special Edition)	*1273002

The River Wild	*1336304
The Wizard Of Oz	0001404
A Few Good Men	*1106301
Patriot Games	*1051309
Carlito's Way	*1229301
Batman (1989)	*0642504
Batman Returns	*1029909
Goodfellas	*0969808
Home Alone 2: Lost In New York	*1104900
Backdraft	*0559005
The Abyss	*0881102

3 Laser Discs \$1.00 EA

See Details Below.

Plus 1 More At Great Savings!

* Letterbox



The Return Of The Jedi (THX)	*1415900
The Empire Strikes Back (THX)	*1415801
Predator	*0364901
Predator 2	*0104307
Star Trek I: The Motion Picture	*0203505
Star Trek II: The Wrath Of Khan	*0201301
Star Trek III: The Search For Spock	*0201608
Star Trek IV: The Voyage Home	*0430603
Star Trek VI: The Undiscovered Country	*1001007
Basic Instinct	*1033208
On Deadly Ground	*1251909
The Prince Of Tides	*0847103
Scent Of A Woman	*1121300
Timecop	*1332204
Street Fighter	1384007

The Last Of The Mohicans (1992)	*1071406
The Hunt For Red October	*0825000
The Shadow	*1297001
Jaws	*0844605
Under Siege	*1077908
Conan The Barbarian	*0220509
Sleepless In Seattle	*1154905
Ghost	*0826008
2001: A Space Odyssey	*0844308
In The Line Of Fire	*1190107
Bridge On The River Kwai (Restored)	*1143809
The Piano	*1237809
The Pagemaster	*1338409
E.T.: The Extra-Terrestrial	*0681106
Die Hard 2: Die Harder	*0041806
Cliffhanger	*1149301
The Professional	*1364801

The Silence Of The Lambs	0805309
Bram Stoker's Dracula	*1102904
The Adventures Of Baron Munchausen	*0594309
Maverick	*1297209
Dragonslayer (Remastered)	*1352103
Junior	*1364504
Drop Zone	*1364306
Double Dragon	*1353606
Natural Born Killers	*1327709
Wolf	*1314905
Darkman	*1375609
Darkman 2: The Return Of Durant	*1372101
I.Q.	*1381904
Paper Moon (Dir.'s Series)	*1382209
Ren And Stimpy: The Essential Collection	*1411206
Total Recall	*1286103
Philadelphia	*1251404
Demolition Man	*1199306

NEW RELEASES

Billy Madison	*1389402
Boys On The Side	*1386309
The Brady Bunch (Movie)	*1381003
Demon Knight: Tales From The Crypt	*1372200
Immortal Beloved	*1372309
Just Cause	*1386408
Nell	*1382100
Nobody's Fool	*1382902
Tank Girl	*1389600
Disclosure	*1371004
Little Women (1994)	*1372903
Murder In The First	*1371103
The Bodyguard	*1105907
Ladyhawke	*1356302
A Clockwork Orange	*1356005
Four Weddings And A Funeral	*1302900
Journey To The Far Side Of The Sun	*1352400

©1995, The Columbia House Company

Here's a great way to build a collection of your favorite movies - on laserdisc! Just write in the numbers of the 3 laserdiscs you want for \$1.00 each, plus shipping and handling. In exchange, you simply agree to buy four more laserdiscs in the next two years, at regular Club prices (currently as low as \$29.95, plus shipping/handling)-and you may cancel membership at any time after doing so. What's more, you can get still one more movie for the low price of \$19.95 and have less to buy later (see complete details in coupon).

Free Magazine sent every four weeks (up to 13 times a year) reviewing our Director's Selection - plus scores of alternate choices, including many lower-priced laserdiscs. And you may also receive Special Selection mailings up to four times a year. (That's up to 17 buying opportunities a year.)

Buy only what you want! If you want the Director's Selection, do nothing - it will be sent automatically. If you prefer an alternate selection, or none at all, just mail the response card always provided

by the date specified. And you'll always have 14 days to decide; if not, you may return the selection at our expense.

Money-Saving Bonus Plan. If you continue your membership after fulfilling your obligation, you'll be eligible for our generous bonus plan. It enables you to enjoy great savings on the movies you want - for as long as you decide to remain a member!

10-Day Risk-Free Trial We'll send details of the Club's operation with your introductory package. If not satisfied, return everything within 10 days at our expense for a full refund and no further obligation.

For fastest service, use your credit card and call us toll-free 24 hours a day:

1-800-538-2233 Dept. KK7

COLUMBIA HOUSE
LASERDISC CLUB

Entertaining
America...
One Person
at a Time.®

Columbia House Laserdisc Club

Dept. KK7, P.O. Box 1112, Terre Haute, Indiana 47811-1112

Yes, please enroll me under the terms outlined in this advertisement. As a member, I need to buy only 4 more selections, at regular Club prices, in the next 2 years.

Send me these 3 laserdiscs for \$1.00 each-plus \$1.50 each shipping and handling (total \$7.50).

BUY YOUR FIRST SELECTION NOW-AND HAVE LESS TO BUY LATER!

☐ Also, send me my first selection for \$19.95, plus \$1.50 shipping/handling, which I'm adding to my \$7.50 payment (total \$28.95). I then need to buy only 3 more (instead of 4) in the next 2 years.

Please Check How Paying: ☐ My check is enclosed

☐ Charge my introductory laserdiscs and future Club purchases to:

☐ MasterCard ☐ Diners Club ☐ AMEX ☐ VISA ☐ Discover

Acct. No. _____ Exp. Date _____

Signature _____

Name _____

Address _____ Apt. _____

City _____ State _____

Zip _____ Phone No. (_____) _____

Do any of the following apply to you? (41)

☐ I own a Personal Computer (1) ☐ I own a PC with a CD-ROM (2) ☐ I plan to buy a PC with a CD-ROM (3)

Note: This offer applies to first-time Laserdisc Club members only. Limit one per household. Columbia House reserves the right to request additional information, reject any application or cancel any membership. Offer limited to the continental U.S. (excluding Alaska). Applicable sales tax added to all orders.

31-10/95

Shuttle Plus system: By pressing the opposite scan button (reverse while the VCR is searching forward, for example), the speed slows down. The 624U was also our T-120 rewind champ, with a world-record speed of 2:10—critical, perhaps, if you've got to fly in order to avoid a midnight cutoff and rental late-fee at your local video store.

In terms of performance, the 624U ranked way up there—just a notch below our top performers at SP speed and basically on par with them at EP speed; this VCR is clearly optimized for EP use. Resolution was excellent, and the comb filter seemed reasonably tight, with just a bit of rainbow shimmering in the multiburst pattern. We could even see a hint of detail in the 4-MHz stripes—most VCRs filter out that detail entirely. Still frames looked a bit jittery at both speeds.

OPTIMUS MODEL 59

This model, which is manufactured by Sharp and sold at Radio Shack and Incredible Universe outlets, appears almost identical to Sharp's H942U. The main difference is that the Model 59 (\$379) has a set of front-panel A/V input jacks. Its rapid-search function is more

convenient, because you can kick in its 5X (SP) and 15X (EP) action from the remote; unfortunately, these figures really aren't that rapid. The 59 has a faster rewind time than the Sharp, clocking in at 2:35. Otherwise, it's pretty packed in terms of convenience features. Instant replay repeats the last 20 seconds of the tape you're watching, which is useful if you've stopped a tape to get a snack or answer the phone and then need to ease back into the program. VCR Plus+, cable-box control, auto clock setting, 30- to 120-second commercial kill, and Tamper Proof circuitry, which prevents kids from fiddling with the VCR's settings and modes, also make a welcome appearance.

Performance was below average for this group. Chroma noise was excessive, and the comb filter allowed considerable rainbow shimmering in the multiburst test pattern. Resolution was average at best. Still frames, on the other hand, looked very good and were truly stable at the SP speed, and they looked almost as good at EP.

PANASONIC PV-4562

Though the PV-4562 (\$379) has a basic look, its remote is compact and a

pleasure to use. It features a unique thumbwheel that makes navigating the on-screen menu and programming the timer easier than with most other models: You rotate to the selected entry, then press down on the wheel to make your selection—that's it! It doesn't have cable-box control, but it does have VCR Plus+ and a 60-second commercial-skip function, and it's the only model in this group that can record at the intermediate LP tape speed (providing 4 hours with a standard T-120 tape). Rapid-search speeds measured an impressive 9X at SP and 27X for EP—as fast as any VCR in this group. The 4562's Achilles' heel is its rewind speed, which I clocked at 4:30—over a minute longer than any other model.

More importantly, the 4562 was the top performer at both SP and EP. It had ever-so-slightly higher resolution and less in the way of visible picture noise than its peers. The minimal chroma noise was particularly impressive, as was its comb filter—we saw virtually no rainbow effects in any of the multiburst stripes. Still-frame quality was very good for both SP and EP speeds, with a very stable picture. The LP recording speed did indeed appear to

STATS & SPECS
Models listed alphabetically in general performance tiers

Make, Model Phone	Price ¹	Size ² ; Weight	Record; Play Speeds	Cue & Review Search ³	Timer ⁴	VCR Plus+	Cable- Box Control	Jog/ Shuttle Dial ⁵
Panasonic PV-4562 201.392.6415	\$379	3.5 x 14.9 x 11.3; 8.4 lbs.	SP, LP, EP; SP, LP, EP	9x; 27x	8/30	●	○	○/○
Sony SLV-740HF 201.930.1000	\$399	4.2 x 17 x 12.5; 11 lbs.	SP, EP; SP, LP, EP	7x; 21x	8/30	●	●	●/●
Toshiba M-661 201.628.8000	\$400	3.5 x 15.2 x 13.2; 9 lbs.	SP, EP; SP, LP, EP	5x, 9x; 7x, 27x	8/365	○	○	○/○
Fisher FVH-4914 800.421.5013	\$330	3.8 x 14.2 x 11.4; 8.6 lbs.	SP, EP; SP, LP, EP	5x; 27x	8/365	○	○	○/●
Golostar GVR-E468 201.816.2000	\$340	3.6 x 14.2 x 12.0; 9.7 lbs.	SP, EP; SP, LP, EP	5x, 9x; 15x, 27x	8/365	●	○	●/●
Hitachi VT-F392A 800.241.6558	\$349	3.7 x 14.9 x 12.6; 9.9 lbs.	SP, EP; SP, LP, EP	5x; 15x	8/365	●	○	○/○
JVC HR-VP624U 201.794.3900	\$399	3.7 x 14.2 x 11.7; 8.4 lbs.	SP, EP; SP, LP, EP	7x; 27x	8/365	●	●	○/○
Optimus Model 59 800.843.7422	\$379	3.6 x 14.9 x 11.3; 7.7 lbs.	SP, EP; SP, LP, EP	5x; 15x	8/365	●	●	●/○
Samsung VR8805 201.229.4000	\$330	3.5 x 15.7 x 12.5; 9 lbs.	SP, EP; SP, LP, EP	5x; 7x	8/30	○	●	○/●
Sharp H942U 201.529.8200	\$390	3.6 x 14.9 x 11.5; 7.7 lbs.	SP, EP; SP, LP, EP	3x, 5x; 5x, 15x	8/365	○	○	●/○

KEY ● Yes ○ No F = Front Panel R = Rear Panel

NOTES 1. Suggested retail. 2. Height x width x depth, in inches. 3. SP; EP. 4. Number of events/number of days. 5. On front panel/on remote control; see text for details. 6. Controls TV, VCR, and cable box, unless otherwise noted. 7. SP/EP, in lines. 8. Unweighted video, SP/EP; weighted video, SP/EP; (bottom row) chroma AM, SP/EP; chroma PM, SP/EP, in decibels. 9. Hi-Fi mode, range in hertz with decibel deviation. 10. In decibels. 11. Hi-Fi mode, in percent.

offer intermediate performance.

SAMSUNG VR8805

The VR8805 (\$330) is relatively loaded, featurewise. Its green, busy-looking display presents lots of information, including a graphic of the cassette reels in motion and a tape-remaining bargraph. The remote control has a true jog/shuttle system with variable-speed slow motion. Rapid search, unfortunately, is limited to 5X at SP and 7X at EP—extremely weak for this group. Rewind time was excellent, however, tying for third at 2:20. The remote control also triggers a repeat function that, like a similar function on the Optimus, rewinds for about 20 seconds and then triggers the play mode. There's a 30- or 60-second commercial-skip function. Cable box-control is provided (though VCR Plus+ isn't), and excellent charts in the owner's manual explain how the universal remote operates different brands of TVs. The 8805 is unique in providing an extra set of audio output jacks on the rear panel, and there's a special dubbing mode that's said to improve the quality of your copies.

Our tests landed the 8805 in the mid-

dle of the pack in terms of performance. While resolution was about average, the color bars appeared very noisy at the EP speed, and there was a lot of rainbow shimmering in the multi-burst stripes at both speeds. The red color bar was slightly shifted toward magenta, and reds in general were particularly noisy. Still frames showed a lot of tearing at the top of the frame at SP, but they were fine at EP.

SHARP H942U

The H942U (\$390) has a convenient shuttle dial on the VCR itself (though there isn't one on the remote); play, stop, and pause buttons are cleverly placed inside (similar to the layout of the Sony and Panasonic VCRs tested here). Rapid search is an abysmally slow 3X at SP and 5X at EP. You can zip along a bit faster if you use the shuttle dial (5X and 15X, respectively), but you have to get up and poke the front panel to do that. The 942U's best convenience feature is its front-panel SETUP button, which brings up an easy-to-follow menu system. There's no VCR Plus+ or cable-box control, but you do get 30 to 60-second commercial skip, a time-search function, and Tamper Proof

circuitry. Rewinding took a relatively slow 3:10.

Resolution was good, but visible picture noise was rampant. Chroma noise was below average at both tape speeds, and there was a lot of rainbow shimmer with our multi-burst pattern. We also noted that the luminance level was slightly elevated compared to that of the other VCRs—this could require lowering the TV's brightness control whenever this VCR is used. Still frames were very jittery at SP speed, but they were very good at EP.

SONY SLV-740HF

The SLV-740HF (\$399) has a strong roster of convenience features. There's auto clock setting, and cable-box control is on tap using the handy, detachable cable-mouse system. Both the remote and the VCR have a shuttle control, with play and stop buttons inside (there's no jog dial, unfortunately). You also get VCR Plus+. The control knob illuminates on the VCR for convenient nighttime operation. The display is bright blue, and you can dim it if you find that it's too bright for your tastes. The jack that the cable mouse

CONTINUED ON PAGE 104

STATS & SPECS				LAB MEASUREMENTS				
	Double-Speed Play	Remote Control ⁶	Input/Output Jacks	Horizontal Resolution ⁷	Picture S/N ⁸	Audio Frequency Response ⁹	Audio Dynamic Range ¹⁰	Audio Distortion ¹¹
	○	Universal	F/R	240/230	47.4/45.7; 48.8/49.2 48.4/44.8; 47.4/44.8	20-20,000 +0.1, -1.9	81.7	0.3
	○	Universal	R	240/230	50.3/47.3; 53.4/49.3 46.2/42.1; 46.7/42.8	20-20,000 +0.2, -3.4	87.4	0.3
	○	Universal (TV only)	F/R	240/230	49.3/49.2; 53.4/52.3 46.3/44.7; 40.9/40.0	20-20,000 +0.2, -1.1	87.8	0.3
	○	Universal	F/R	220/220	50.0/49.1; 53.3/51.7 46.3/43.3; 46.6/43.9	20-15,000 +0.1, -3	84.4	0.4
	●	Universal	F/R	240/230	47.8/43.6; 51.6/50.2 44.9/45.1; 43.4/43.6	20-20,000 +0.1, -2.6	83.3	0.3
	○	Illuminated universal (TV only)	F/R	230/220	49.2/49.3; 52.5/51.4 45.7/39.5; 46.4/39.8	20-20,000 +0.1, -2.7	87.7	0.3
	○	Universal	F/R	240/230	45.2/46.7; 48.3/48.1 44.7/40.3; 44.7/40.1	20-20,000 +0.1, -3.4	92.8	0.3
	○	Universal	F/R	230/220	48.8/49.2; 52.3/52.2 46.4/42.4; 45.3/41.6	20-15,000 +0.1, -3	87	0.4
	○	Universal (TV only)	F/R	240/230	49.6/50.2; 53.4/51.9 46.2/41.6; 40.4/39.7	20-20,000 +0.1, -2.1	91.7	0.4
	○	Universal	R	230/230	49.6/49.4; 52.7/52.1 47.4/42.9; 46.2/42.2	20-15,000 +0.4, -3.7	78.4	0.4

Deep sea divers spend time in hyperbaric chambers to decompress.

(What do you do?)



A few hours with a Pioneer® Advanced Home Theater system will bring you back to normal. At the heart of our system you'll find our VSX-604S Dolby® Pro Logic® A/V Receiver. It opens up the stunning world of surround sound, delivering a full



110 watts to all channels (front, rear and center). And with the Intelligent System Control you can even operate all your non-Pioneer components with just the touch of a button. Hit the VCR button and on goes your TV, VCR and receiver, each



adjusted to their proper input and surround modes. To find out about our complete range of home theater equipment and for a dealer near you, give us a call at 1-800-PIONEER. And while another way to unwind may come along someday, don't hold your breath.

A D V A N C E D H O M E T H E A T E R



© 1995 Pioneer Electronics (USA) Inc., Long Beach, CA.
Dolby and Pro Logic are registered trademarks of Dolby Laboratories Licensing Corporation.
Custom home theater cabinetry by ECLECTICS, North Hills, CA 91343.



SURROUNDED

Intro to AC-3, Part III: The Dipole-vs.-Monopole Debate

DOLBY SURROUND AC-3, THE NEW, 5.1-channel digital surround-sound format from Dolby Labs, poses many questions for the apt home-theater enthusiast. As we've discovered ["Surrounded," September 1995], a high-end incarnation of AC-3 outperforms a comparable Dolby Pro Logic system in terms of basic performance, thanks to the former's enhanced vocal clarity, discrete-stereo surround channels, and dedicated "low-frequency effects" (LFE) subwoofer channel. We also focused on the capabilities of AC-3's discrete surround channels ["Surrounded, Part II," October 1995], wondering whether their full-range nature requires that they be served by full-range "tower" speakers or sub/satellite combinations. (It does, at least

in a no-holds-barred high-end system; standard-size surround speakers should suffice in most systems that employ a single LFE-fed subwoofer.)

Another obvious question springs to mind, however: Since AC-3 employs discrete surround channels that are capable of independent "rear-stereo" operation, and may be employed by the technicians who mix soundtracks to direct *specific* sonic images into the room at precise locations, should an AC-3-equipped home-theater system—or a home-theater system that may be upgraded to AC-3 sometime in the future—use "dipole" or conventional "monopole" surround speakers?

Dipole surrounds have become something of a standard among high-end home theaters, thanks in large part to

Lucasfilm Ltd.'s Home-THX certification program, which specifies them for surround reproduction in THX-approved home theaters. Dipoles use identical arrays of speaker drivers on their front and rear faces, and the two driver arrays work out of phase—that is, when the front drivers are moving out in an effort to reproduce sound, the rear drivers are moving inward. This out-of-phase action produces a strong "null" to both sides of the speaker. Dipoles are designed to be set up to either side of the primary listening position, so it falls within the null area. The result is that most of the surround-channel output that reaches the listener is "reflected" rather than "direct" sound, creating the "diffuse-field" surround-channel sound that THX favors:

PHOTO BY TONY CORDOZA

spacious, enveloping, highly ambient, and difficult to localize. Each of these qualities is generally accepted as desirable traits in a Pro Logic system. (Quasi-dipole and "bipole" speakers use variations on the dipole's driver configuration and/or work in phase, with somewhat similar if not identical results.)

In my experience, dipole surrounds that are properly located (high and to the sides of—not behind—the listeners) are almost always superior to conventional monopole surround speakers, which use one driver array that faces into the room. And this holds true whether or not THX's enhancement of Dolby Pro Logic is being used. In virtually every test I've made, switching to dipoles has "opened up" the surround effect and substantially reduced the ear's tendency to "pull" to one surround speaker or the other. In other words, I've very rarely found myself thinking that specific surround effects are coming from the surround speakers. But do the same rules apply in an AC-3 setup, where the surround speakers are fully discrete, independent channels that can be used in ways that Dolby Pro Logic's monaural, bandwidth-limited

surround channel didn't permit? After all, dipole surrounds evolved in a Dolby Surround world.

Lucasfilm's answer is unequivocal: Dipoles are still it. According to a recent THX paper entitled *Home THX and 5.1 Channels*, "Theaters don't switch to single pairs of speakers [versus numerous surrounds arrayed throughout the cinema] . . . for 5.1-channel soundtrack[s]. A pair of dipole surround speakers will provide the same type of soundfield in the home. They will easily localize as left and right surround soundfields . . . [but] what they won't do is cause the soundfield to collapse into the speaker." Skeptics may not be surprised when they hear this pronouncement, grousing that Lucasfilm is hardly going to abandon dipoles after they've been telling everyone to use them for the last 5 or so years. After auditioning a high-end AC-3 system with both dipole and monopole surrounds, however, I'm siding with Lucasfilm.

The basic setup was the same as that featured in both of our earlier AC-3 trials: Enlightened Audio Designs' TheaterMaster preamp/decoder and T-8000 III combi-player transport, B&W's 803

Series II tower mains and their HTM center up front, a B&W 800ASW powered subwoofer, and Acurus and Adcom amps rated to deliver 100 watts per channel all around. AC-3-encoded laserdiscs included *Clear and Present Danger*, *Stargate*, and *True Lies*.

For this comparison, I set B&W's 805 monopoles against their THX-certified SCM-8 dipoles. In terms of driver arrays and fundamental tonality, the two B&W models have a strong family resemblance; the SCM-8, in fact, is sort of two 805s set back to back. The 805 has one 6.5-inch woofer and one 1-inch tweeter on its front face. The SCM-8 has one of each on its front and rear faces, and, following dipole practices, the two driver arrays operate out of phase with one another.

In addition to long-term listening with numerous back-and-forth switches (and careful surround-level calibration each time), I also performed direct A-B comparisons using a level-compensating speaker-level switchbox. The two speaker pairs couldn't be in the same place at the same time, of course. The SCM-8s were wall-mounted about 6 feet off the floor and about 1 foot forward of, and 7 feet to each side of, the

POWER PLAY

Do you need equal power for all of AC-3's channels?

AS YOU PONDER THE INTRICACIES OF Dolby Surround AC-3 and its wondrous surround channels, a thought suddenly occurs to you: Do I have enough power? For that matter, what *is* enough power?

AC-3's five-plus-one channels are substantially different from Dolby Pro Logic's four. Up front, AC-3's left, center, and right speakers will enjoy increased dynamic range thanks to the format's direct digital connection and digital-domain decoding—but the increase will be slight, given the generally excellent performance of current laserdiscs and Hi-Fi videotapes. In other words, if you're enjoying satisfying output levels and dynamics from your front speaker trio today, you'll continue to enjoy them tomorrow with AC-3.

The situation isn't so simple with surround speakers and subwoofers. A typi-

cal A/V receiver delivers two-thirds to three-quarters less power to the surrounds than to the front channels. In most cases, this configuration works reasonably well: Dolby Surround's monaural rear channel only requires reproduction from 100 to 7,000 Hz, and lopping those two-plus octaves off the bottom end cuts power requirements roughly in half. (The treble rolloff's impact on power needs is almost insignificant.)

AC-3, on the other hand, employs discrete-stereo surround channels that, performance-wise, are identical to the front left and right outputs: full-range and fully dynamic. In theory, this means the surround channels should be driven with the same amount of power as the fronts—especially if you plan to use full-range surround speakers. So if you want to build a fully state-of-the-

art AC-3 system with full-range effects speakers, equal power all around is the only way to go.

You may not be a state-of-the-artist, of course, and other paths don't have to introduce unacceptable compromises. Consider that, even though AC-3's surround channels have full-range capability, it seems probable that soundtrack mixers will only rarely ask the surrounds to reach the full-band, full-scale output levels of the fronts. ("Seldom" doesn't mean "never," though.) Also consider that, in most home theaters, the surround speakers are considerably closer to the listeners, so if the surround speakers have the same sensitivity ratings as the front speaker trio, somewhat less power to the surrounds should do the trick.

Lastly, and most importantly: All AC-3 decoders, whether freestanding or integrated into an A/V receiver or similar component, will include a comprehensive digital crossover that lets you send surround-channel low-frequency content to the main LFE subwoofer, where it's *added* to the system's "point-one" low-frequency

listening position; their drivers faced front and rear. The 805s were stand-mounted directly below the dipoles (putting their tweeters about 40 inches above the floor), and they were arrayed in a very broad V aimed rearwards (previous experience had shown that this layout was the best when monopole surrounds were used in this AC-3 system in my listening room). Since both B&W speakers have limited deep-bass capabilities, I used the digital-domain crossovers in EAD's TheaterMaster to send surround-channel bass below 80 Hz to the subwoofer and to roll off the surrounds below the same frequency (the SCM-8s are designed for this arrangement, and it makes perfect sense with the 805s).

I found that the SCM-8 dipoles provided a broader, more enveloping surround "feel" under almost all conditions. Not surprisingly, ambient segments such as crowd scenes, open-space environments, and "cocktail-party-effect" segments benefitted the most from the dipoles' presence, seeming more natural and more believable.

On the other hand, the dipoles didn't localize discrete surround effects as precisely as the 805 monopoles. When

an AC-3 soundtrack called for a particular effect to emanate distinctly from one of the rear channels, it was slightly vaguer with the SCM-8 dipoles. This wasn't altogether "bad" or necessarily even undesirable. Even with hardpanned surround-channel effects, the dipoles' more diffuse response usually sounded more organic in this system, just as it did with more diffuse effects.

The "Escobado in the batting cage" scene in *Clear and Present Danger* (Side 1, Chapter 2, 10'45") emphasized the differences the two approaches lend to overall ambience. Via the dipoles, the sense of ambience was decidedly more spacious, diffuse, and perceptibly larger—in short, pretty much everything you want from an echoey ambient scene. The 805s did a fine job with this scene, too, but the *thwack* of the bat tended to pull my ear to the nearer speaker if I sat just a bit off-center.

Later in the same film (Side 1, Chapter 2, 13'06"), a scene in which a robin chirps off-screen right subtly but beautifully demonstrates AC-3's discrete-channel surround powers. With this segment, the dipole/monopole difference was easier to hear—but harder to evaluate. With the SCM-8s, the chirp

was slightly less distinct and less specifically localized than it was via the 805s (though it still was unequivocally right-rear). But I didn't think the dipole rendition lacked realism; in fact, its slightly less-precise localization seemed to enhance the open-air effect.

The two speaker setups sounded most different during the "through the star-gate" segment of *Stargate* (Side 1, Chapter 5, 30'56"). In this scene, various discrete and broadband effects ping-pong between AC-3's two surround channels. With the dipole SCM-8s, the effects were more open, enveloping, and "spacey," while the 805s produced zippier, more head-snapping effects. Since there's no reference point in reality, this kind of thing is purely a matter of taste. And I preferred the dipoles: They had less tendency to pull my awareness away from the screen, but still delivered plenty of discrete-surround wizardry.

Ambient, surround-intensive scenes also benefitted from the use of dipole surrounds. With the feast scene in *Stargate* (Side 2, Chapter 1, 0'04"), in which music, babbling voices, wind noise, and tent-creaking are all mixed

CONTINUED ON PAGE 105

effects bass signal (and to any low-end frequencies crossed over from the front trio). Use the crossovers in this fashion and you'll be able to reduce the surrounds' power needs by a factor of one-half or so.

AC-3's surround channels feature dramatically higher dynamic range than DPL's monaural surround channel, though. In a typical system, therefore, a middling DPL-equipped A/V receiver might successfully get away with having only 25-watt surround channels, but an AC-3 equivalent might well need an honest 40 watts per channel to stay out of trouble—even when you've sent all sub-80-Hz bass to the LFE subwoofer.

We must also consider noise: The surround-channel amps in many DPL-equipped A/V receivers are relatively noisy and aren't capable of acceptably high dynamic range. This generally isn't a problem with DPL, since the amps' noise usually gets swamped by the noise inherent in any DPL-encoded program's matrixed surround-channel signal. This won't fly with AC-3, since its surround channels are every bit as quiet and capable of serious dynamics as its fronts.



For state-of-the-artists: B&K's AV6000 is rated to deliver 105 watts x 6.

AC-3 surround amps will need full dynamic range and excellent signal-to-noise performance—at least 78 dB (referenced to 1 watt) or better. This fact alone may prevent AC-3-equipped A/V receivers from ever being as small or affordable as today's budget DPL-equipped A/V receivers.

AC-3 is also different regarding its LFE channel. I've found that AC-3-encoded laserdiscs have more (or at least different) bass content than their Dolby Surround-only counterparts. This proba-

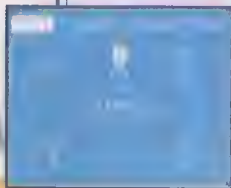
bly arises from the separate low-frequency effects channels employed in topnotch movie theaters, which grant moviemakers an extra margin of bass headroom for movie staples like explosions and really big car crashes. This may cause audible distortion with home theaters that channel all low-frequency content to a single sub. Adding a second well designed sub should be an effective remedy, since this typically boosts low-end capability by 3 or 4 dB, depending on room acoustics and placement. —DK

HIGH TECHNOLOGY
WITHOUT THE
HIGH ANXIETY

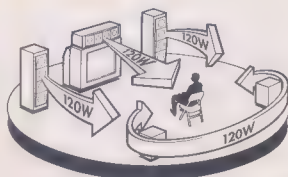
HOW TO BRING HOME THE R



HELP!



On-screen displays guide operations, including a help button that can pinpoint a problem and offer a solution right on your screen.



class **H⁺**

The Class H⁺ amp sends equal power to all channels with 2 dB dynamic headroom.

INTRODUCING THE ULTIMATE IN
HOME THEATER SOUND — THE NEW
TECHNICS SA-TX1010 HOME THX
RECEIVER. NOT ONLY DOES IT MEET
LUCASFILM'S STRINGENT STANDARDS
FOR REPRODUCING MOVIE SOUND-
TRACKS, IT ALSO MEETS OUR OWN.
IT OFFERS THE REALISM OF DOLBY*
PRO LOGIC SURROUND, EQUAL

The remote controls other
Technics audio compo-
nents and most brand
name video components.

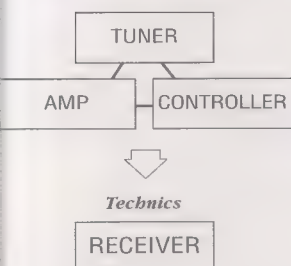
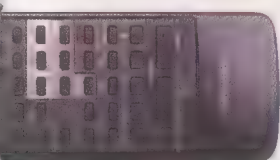


Sound Stage
Imaging delivers
realistic surround
effects even with
stereo sources.

* When using video tape, laser disc or broadcast which is encoded with Dolby Surround. Dolby is a trademark of Dolby Laboratories Licensing Corp.

To speak to your nearest Technics

RIGHT HOME THEATER RECEIVER.

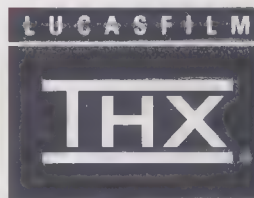


With Technics you get
Home THX electronics
in a single chassis
receiver.

POWER TO ALL CHANNELS, PROPER
STEREO IMAGING AND LOCALIZA-
TION, AND FULL DYNAMIC RANGE
CAPABILITY WITH LOW DISTORTION.
SO IF YOU WANT TO EXPERIENCE THE
ULTIMATE IN HOME THEATER SOUND,
TECHNICS HOME THX RECEIVER IS
THE RIGHT ONE TO BRING HOME.

Technics®
The science of sound

*You'll enjoy amazingly
lifelike sound on par with
that of fine movie theaters.*



THX is a registered trademark of Lucasfilm Ltd.

Proud Sponsor of the
1996 U.S. Olympic Team



dealer, call toll-free: **1-800-793-6912**

MAKING THE SCENE

Reference scenes simplify the process of home-theater system and component evaluation

BY PETER BARRY

HOME-THEATER COMPONENTS are endlessly fascinating. Features are continually added, and flexibility is improved. But when a system is really firing on all cylinders, we can forget about it and simply enjoy the program we're experiencing. At that point, it isn't about picture tubes or computer chips or speaker cones. It's about the aural and visual environment that a team of artists has created. As long as they've done their job well, our home-theater gear becomes the border we must cross to reach the point where we are fully absorbed and truly entertained. Hardware becomes a means to an end, not the end itself; it must be good enough to disappear. There's only one sure way to judge whether an individual component can contribute to this illusion. Likewise, there's only one way to determine whether your system, or an adjustment you've made to it, is bringing you closer to the ideal. And that's by looking at and listening to it carefully.

Whenever you're shopping for a new component or are making adjustments to your system, the first thing you should do is throw a batch of reference scenes at it. Use specific scenes that you've watched and listened to time and time again—scenes with which you're intimately familiar. The familiar

will give you an immediate sense of what has changed. Look and listen for differences rather than sameness in these scenes: Is the soundscape more spacious, the image more detailed, the color rendition accurate?

To give you an idea of the kinds of scenes we're talking about, we turned to six of the most respected pairs of eyes and ears in the business and asked them what scenes they use when they get down to work. Three specialize in the video side of things, and three concentrate on the audio side. On the video side, we spoke to John Dowdell, Robert Harris, and Joe Kane. Jim Fosgate, Tom Holman, and Kevin Voecks covered the audio side.

While all six experts use laserdiscs when evaluating home-theater gear, you can still use the scenes they mention in a tape-based system, especially on the audio side of the ledger. S-VHS dubs from a good source (such as DSS or Primestar) can also be revealing with scenes recommended for video detail, though even they aren't as reliable as laserdiscs in terms of color.

Not surprisingly, each of these experts had his own priorities. And even though a pursuit of excellence is their day-to-day work, they still speak emotionally of involvement, immersion, and how the experience should *feel*.

Their insights combine to create a compelling reference for pursuing home-theater excellence.

ROBERT HARRIS

Robert Harris is a film-restoration maestro, having overseen the resurrection of such classics as *Lawrence of Arabia*, *Spartacus*, and *My Fair Lady*. He has almost single-handedly proven that a quality restoration can also be profitable to a movie studio, whether the re-release is intended for movie theaters or home theaters. A good eye is required for this type of work, and his experience has allowed him to develop unique skills. Because much of his work entails the salvaging of faded and damaged film elements, Harris is acutely aware of how source quality affects video quality. He has also learned how important details are—and how the movie experience suffers when they're diminished or lost, whether by damage to the original film or an inadequate TV setup. His comments also underscore the role accurate color temperature plays in a high-end home theater.

"ONE OF THE THINGS YOU WANT IN A film-to-video transfer is to begin with a film element that's going to give you a great deal more information than can be replicated in a domestic NTSC signal.



Then you attempt to keep the image as sharp, clear, and perfect as possible. For *My Fair Lady*, we produced an extremely high-resolution 35MM element. The transfer was grainless and was done without using artificial sharpness, which is used on a lot of discs.

"In Chapters 22 and 23, I look for the detail in the books in Rex Harrison's study. And there's a shot where Harrison is looking down from the second floor to Wilfrid Hyde-White, who's standing on an oriental carpet. You should be able to see the detail in the carpet; the color and the pattern came across 100 percent. Look at the fabrics of the clothing—at Hyde-White's suit, or at the tweed in Harrison's jacket.

"In the Ascot Ball scene, look at the men in their tuxedos. You can see the satin sheen of their shirt lapels and the shiny stripe that runs down the side of the trousers, compared to the flat black wool of the rest of the tux. You should see that difference distinctly. That sheen is very difficult to get. For comparison, look at Voyager's *The Red Shoes*. It, too, had a superb transfer, but it came from what I would consider a defective film element. All the detail that should be there isn't; it's just a buildup of contrast. You can hardly see the difference in shades, and the best monitor in the world can't show you anything more because nothing more is there. Technically, these two transfers are the best you can get. I don't mean to denigrate the Voyager disc; it really is wonderful. It's just to illustrate the difference.

"Again in *My Fair Lady*'s Ascot sequence, the women are all wearing white or off-white and black, and some of the men are wearing gray or blue-gray. *Anything* can start leaking into a gray. But the transfer here is dead-on. When Audrey Hepburn makes her appearance, her dress is pure white and pure black, and the flowers on her hat are pure red. If you get anything other than that, your TV is either not set up correctly or it can't be set up correctly."

JOHN DOWDELL

John Dowdell, telecine director of New York City's The Tape House, is a telecine colorist in the transfer of movies from film to video. He's the one who makes many of the tough decisions on how to recreate colors and details—how to capture the subtleties—when a film is being transferred to video. Because the abilities of the laser-

disc, broadcast TV, videotape, and other formats differ so much, his goal is to retain the overall effect of a film in its video incarnation.

"I COLLECT LASERDISCS, AND WHAT I consider a really exceptional image is one that really pops—that captures what's in the film and brings it into an electronic mode. That's hard to achieve. Video is limited by color phosphors and luminance levels, and its contrast range is limited compared to film. So when I watch the original film,

crushed together. In a good one, there will be depth to shadows and texture to the highlights. And there will be a rich middle range that gives the entire image depth—the image *pops*.

"One of the recent transfers I've done is *Remains of the Day*. In Chapter 2 [8'30"], there's an aquamarine car in the mansion's driveway. The car should be a fully saturated aquamarine with a finely detailed grille. This scene leads into a fox hunt. On the horses, you can almost *feel* the depth and presence of their hair. The whites are clean and bril-



Pure whites and blacks are on display in *My Fair Lady*'s Ascot Ball sequence (top); you should be able to *feel* the depth of the horse hair in *Remains of the Day*.

I gauge its feel and texture. A disc should capture that, and a TV has to be able to display it. I look at a disc's luminance range, the brilliance of it. I notice the distance between shadow and highlight. Is there rich contrast? Is there detail to the deep blacks? Is there color depth? How many shadows are there within the shadows? In a bad film-to-tape transfer, those color details all get

liant. The color values were proper to the gray scale, so everything is natural. The level of green in the grass and trees is proportionate to the amount of red in the hunting coats of the riders, to the browns of the horses, to the blue sky. You don't want one color to dominate another—if it does, you lose the sense of depth. There's a very filmic, tactile feeling to this scene.

AT LEAST YOU AGREE ON THE BEST HOME THEATER RECEIVER

From our value packed new TX-SV424
up to our breakthrough THX model

TX-SV919, ONKYO has
written the perfect
home theater script,
one with award-winning
performances for both
design and technology.

In the first few seconds of the movie
you'll hear the ONKYO difference.
Differences that only oversized
transformers and discrete output stages
can deliver. Differences that allow
ONKYO receivers to supply the power
hungry demands of today's special
effects laden soundtracks. Whether
you're listening to whispers or weapons.

And as the movie develops, you'll find
yourself in a multi-dimensional soundfield
directly inside the on-screen action.
That's because ONKYO utilizes the most
advanced DSP technology, like the latest
24 Bit Microprocessor from Motorola,
capable of taking the director's vision and
making it yours.

Simply put, with an ONKYO home
theater receiver, movies stop being
enjoyable—and become memorable.

So while you may not always agree on
what to watch, with ONKYO there's
simply no argument.

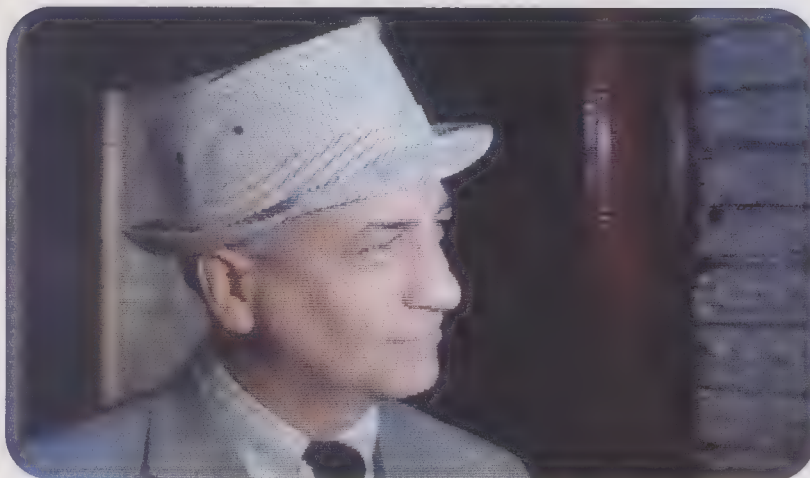


ONKYO®

ONKYO USA CORPORATION
200 Williams Drive, Ramsey, NJ 07446
201-825-7950

E-Mail ONKYO @ NIS.NET

CIRCLE NO. 72 ON READER SERVICE CARD



Very few decoders can reproduce this hat (from *Goldfinger*) without moiré.

"Another great one is *Passion Fish*. There's a section where they're going through the bayou. The imagery is just beautiful. You can see deep into the bayou; a crocodile is coming out of the water. Notice the detail in the shadows of the banks and the texture in the mud. A river snake is swimming on the muddy river.

"You'll also notice the actress Alfre Woodard. She has very rich black skin, and it has a beautiful quality to it. Black skin can take on so many beautiful colors—it just *glows* with shades of red and yellow. And she's there with Mary McDonnell, who's very white-skinned, and together, with the hair textures and the greens of the swampgrass, it makes the whole section very beautiful, with impressive color depth. The entire film has interiors that are dank and dark, but it's not boring dark. You can see the richness of detail in the shadows."

JOE KANE

Joe Kane is the man behind the Imaging Science Foundation. His mission is to bring video manufacturers in line with the standards set by the SMPTE (Society of Motion Picture and Television Engineers) and the NTSC (National Television Systems Committee). He's also the creator of *A Video Standard*, the test disc we use for our TV evaluations. The scenes he's chosen are perfect for judging how well a TV handles the incoming signal.

"THERE ARE TWO TYPES OF DISC DEMONSTRATIONS: the spectacular, and the analytical. I've been using *Searching for Bobby Fischer* for the spectacular and Criterion's release of *Goldfinger* to ana-

lyze whether the image presented by a particular TV is spectacular. Both are examples of superb transfers to video.

"In Chapter 2 of *Bobby Fischer*, there are outdoor scenes in a park in New York City, where people are playing chess. The scenes are light; it's a bright day. First, I want to see that the TV is putting enough light on the screen to give that bright, outdoor feeling. When the movie switches to a darker interior scene, there should still be enough light to see exactly what's going on. And when they pan by a window, you should feel the brightness again. It's a good illustration of a set's light output as well as its ability to handle contrast.

"It's also a very natural transfer as far as colors are concerned. Everything about these scenes looks real. Colors are appropriately saturated. If the contrast is overdriven, the whites will look yellow and detail will be lost in bright and dark scenes. I also use these scenes to demonstrate why, in front-projection setups, I keep screen size down to 6 feet diagonal—you just can't get enough light to recreate the sensation of real sunlight with a larger screen, even if the room is totally dark.

"I use Chapter 2 from the Criterion edition of *Goldfinger* for analysis. As soon as the sign that's being pulled by an airplane across the Miami sky comes up, I look for dot crawl to determine how well the color decoder is functioning. Whether it's a notch filter or a 2-D or 3-D comb filter, I look for the sign's red against the sky-blue background. Does the red bleed into the blue? Then I focus on the sign—is there chrominance-to-luminance delay? In other words, do colors smear along vertical edges? Is there dot crawl along the

sign? This tells me how well the decoder is functioning.

"The camera then goes to a long-shot of the Fountainsbleu Hotel, which tells me about the abilities of a line-doubler. The multi-story hotel has a horizontal pattern to it. If there's diagonal information in addition to the horizontal lines of the building, the line-doubler isn't doing its job well: When using a line-doubler, there are times when it will present real lines and times it'll *calculate* half the lines shown on the screen. The artificial diagonal structure on the horizontal levels of the hotel are an indication that the doubler is calculating lines. The best doublers can find the real 525 lines that represent every film frame, and they display real rather than calculated information.

"As the scene moves around to the front of the hotel, there's a lot of vertical information on the left side of the picture. This lets me see how well a TV's decoder eliminates color from high-frequency luminance information. If your set has a notch-filter decoder, these vertical lines are going to turn to color or break into jagged or colored lines. They shouldn't do either.

"Next we see a man dive into the hotel's pool. The blue water in the pool can be quite noisy. If it is, then the decoder isn't doing a good job of eliminating color noise. There's always potential for video noise in a low-level blue: The blue signal is compressed by a factor of almost 10 in the encode process, so it's amplified by a factor of 10 in the decode process. The potential is there for greatly amplifying the noise. If the decoder isn't really good, you'll see a lot of noise in that scene.

"Then a man walks out to the pool. His woven wool hat causes most decoders to display moiré on-screen. Every decoder shows some cross-color—color coming out in a luminance pattern. But some decoders are better than others at minimizing this.

"As the man walks along the pool's edge, there's a lot of diagonal information, which is the most difficult information for a TV to reproduce. Most diagonal transitions will come out jagged. So I look for smooth diagonals."

KEVIN VOECKS

Kevin Voecks is chief designer at Snell Acoustics, a very well respected speaker manufacturer. Their Music & Cinema Reference package is one of the best home-theater speaker sets

epic... Superior Sound Performance



A monument to 50 years of Klipsch engineering, *epic series* speakers feature Controlled Focus® Technology, a unique combination of performance attributes that result in phenomenal stereo imaging and soundstage. Using a D'Apolito driver configuration, a Klipsch Tractrix® horn, neodymium magnets and exotic cone materials developed exclusively for Klipsch, *epic* speakers deliver extraordinary dynamics for both music and movie soundtrack reproduction.

And Klipsch didn't stop with brilliant technology for the *epic series*. We designed a speaker with a classic aesthetic. *epic series* cabinets are assembled from real wood veneers and finished using a multi-step lacquer process, just like fine furniture. Available in six gorgeous finishes, they will blend beautifully in any home.

For a demonstration of *epic* speakers, visit your local authorized Klipsch dealer, or call 1-800-KLIPSCH for the dealer nearest you.

Manufacturers of Klipsch Audio Entertainment, Home Theater and Distributed Sound Systems

1-800-KLIPSCH

 **Klipsch**®
The Legend Continues...

CIRCLE NO. 70 ON READER SERVICE CARD

Since 1945 © 1995 Klipsch, Inc.

we've heard. When Voecks first encounters a home-theater system, he listens most closely to the abilities of the speakers and the overall quality of the sound.

"WHAT'S IMPORTANT TO ME IS THE MUSICAL involvement. That takes good sound quality. To the best of my knowledge, there are *no* laserdiscs with first-rate sound quality, relative to first-rate audiophile-grade stereo recordings. It's shocking.

"Anyway, we start with music, and it's always in surround mode. First, we

hance rather than diminish the fidelity—again, relative to a two-channel recording.

"The fact is, speaker placement is more significant than anything else. Even if you use identical speakers all around—and I don't recommend that—they'll sound totally different because of their location. Surround-sound speakers are often near side walls, so their response below a few hundred hertz is often up many decibels; that makes things sound thick and muddy, compared to turning them off. It's probably one of the reasons why surround

what I consider to be important for a long time to come: A speaker's ability to do something in stereo.

"One of the movie discs we use is *The Mask*, both Chapter 14 and Chapter 15. In a system that's poorly set up, the song on the soundtrack will have muddy bass, and the vocals—which are mixed right on the edge—won't be very comprehensible. If, for example, the center channel isn't properly integrated, this cut will show that up. I listen to [Cameron Diaz] singing. If the center and surround speakers don't closely match the front left and right in timbre, they'll call too much attention to themselves. Then when Jim Carrey starts singing, his voice can easily sound thick. Switch the center channel in and out and listen for any changes in timbre. The bass can also sound bloated if the surrounds aren't placed away from the walls and ceiling."

JIM FOSGATE

Jim Fosgate is one of the industry's most well regarded designers of surround-sound circuitry. He designed the Fosgate-Audionics brand of surround processors, and his work is now being incorporated in Harman Kardon's revamped Citation line. His latest design is the impressive Citation 7.0.



Unnatural vocals (courtesy Cameron Diaz) can un-Mask a speaker system.

set the speaker output levels properly with an SPL meter—that's extremely important, because we don't want to discern that there are surrounds or a center channel in operation. Only when we switch these speakers on and off do we know what we've lost. And that's how it's supposed to work—there shouldn't be violins swirling around your head.

"This will give you a good indication of how a processor or a speaker sounds in general. We use Proceed's PAV pre-amp/processor and its STEREO SURROUND mode. Many processors will take a stereo recording and turn it into some sort of roller rink, and that's unusable. The decoder should *enhance* the music—not gimmick it up and ruin it.

"The hardest thing for any speaker to reproduce is vocals, because we're most intimately familiar with how voices sound. In surround systems, the added challenge is to keep the timbre that the listener hears close enough between front and back and center to en-

sound doesn't have a hi-fi image in the minds of audiophiles.

"I also listen for smoothness of the low end. Everyone wants lots of low end, for films in particular, but you don't want it at the expense of music quality. Film soundtracks are mostly music. And music and speech are the two hardest things. When you get the voices and music right, you're a huge part of the way there.

"What we play is the *Rhythm, Country and Blues* laserdisc, Side 2, Chapter 5 and Chapter 8. The music and video are so involving, it's a huge hit. It's recorded in stereo, as is The Eagles' *Hell Freezes Over* laserdisc. The hope is that we'll get something that resembles a human voice to listen to, or as close as you can find. The Eagles' disc is quite good—especially Chapter 6, "Hotel California." If the speakers are on the floor or too near walls, the vocals will sound unnatural; they'll be thick or heavy. It's not Dolby Pro Logic material, but it will certainly reveal

"I HAVE A BIG LIST OF THINGS I RUN through, anywhere from 30 to 50 reference discs. In the early part of a design, it may take that many recordings to fully challenge the system. People don't realize that a decoder has to decode *everything* you throw at it, and there are a lot of different dynamics. Classical music is a challenge because it must be smooth and stable; rock music is more forgiving, but difficult to hold the separation on because it often has hard left and right information in it. Electronic music, with all the processing going on, can be a worst-case scenario for keeping the surround logic smooth and stable. And movie soundtracks are another ballgame because you're trying to hold dialogue discrete without letting it leak into other channels. So when I'm designing, I use vinyl, CDs, music videos, and movie soundtracks to check the decoding logic and see how well it's working. Surround-sound listening is a cultivated experience.

"In the opening sequence of *True Lies*—the first four chapters, really—I basically listen for discrete localized dialogue in the center front. I also expect

In our opinion,
the only time flashing
red and green lights are
appropriate in your home
is in the last week
of December.

Fewer parts, better parts, better sound.



A U D I O A N D A U D I O / V I D E O C O M P O N E N T S

CIRCLE NO. 88 ON READER SERVICE CARD

to hear an awesome soundfield, with a lot of separation effects coming from different places, from the ballroom music to the subsequent explosion and chase. The effects should lock to the picture. What you're trying to get with good decoding is a simultaneous high separation of sounds that are coming from many directions at once—that's the most difficult thing for any processor to do. A single sound in one direction is hard to do; two sounds coming from two directions are harder, and three are harder still.

"The goal is for sound to occur simultaneously in different places and still be localizable. When a decoder can't accomplish this, the soundfield falls flat. You can tell this by how open, how spacious, how *big* it sounds. If the image gets smaller sounding or "comes in on you" during peaks, then you can tell it's losing its separation. By that I mean that you usually are listening outward in all directions; if the soundfield comes in to the center of the room, you've lost your separation.

"Another good example is *Always*, Side 3, about 12 minutes in, when they're dropping fire-retardant on the forest fire. If it's really working well, you'll hear the airplane flying all over the room, but the dialogue will still be really tight in the center and not leaking into the wrong channels."

TOM HOLMAN

Tom Holman devised much of the technology behind the THX Theater-Alignment Program for movie theaters as well as the Home-THX standard. His primary concern is the surround channels, since they produce much of the ambience that's needed to convince us that we're no longer sitting in our living rooms, but instead have been transported to the environment depicted on-screen. Currently, Holman is a consultant to THX and runs TMH Corporation, an entertainment technology company he started this year.

"TO ME, IT'S NOT THE TECHNICAL THAT really matters. It's the aesthetic. The sense of envelopment—how you're placed in a spatial event. I've had many discussions with movie sound designers over the years about what can be legitimately placed in the surround channel, given there's no picture there. And the things that are legit to me are ambient sounds, reverberant sounds, and transient flybys.

"In the opening sequence in *Field of Dreams*, there's the ambient rustling of the corn and then the sound of thunder in the surrounds. The scene begins very quietly, but is actually supplying the space for the film to live in. The surrounds are made an extension of the screen, with the corn all around you. Then there's thunder—but it's off in the distance, and it rattles back and forth between the front channels and the surround channels.

"The sound designer has two approaches, which are determined by the way reverb is utilized. In the opening to *Raiders of the Lost Ark*, for example, designers placed Indiana Jones in the cave by putting reverb in the surrounds; the room becomes an extension of the cave. Another way to use reverb is to

frightening because you've been made to be there with them.

"Ambience and reverb are absolutely legitimate uses for the surrounds, but are generally overlooked for the third: the transient flyby. In the opening of *Star Wars*, for example, there are two things going on—what is physically achieved with the soundtrack, and what everybody *believes* is happening. You can take a survey and people will *swear* that the surrounds were directional—that they followed the image from the rear of the room up to the screen. But none of that is true. *Star Wars* has a mono surround track encoded in Dolby Pro Logic, and what everyone experiences is a psychological effect: a preference for vision over sound.

"Vision can sometimes trick our



Out of the fire, but not into the surrounds, with dialogue in *Always*.

put it on-screen. In that case, you're looking through a window into a space. The sound designer has the choice of whether or not to make the audience part of the space on-screen.

"Try the jungle scene in *Apocalypse Now* [Side 2, Chapter 1]. They're on the boat on the river, and the jungle's in front of us, so we hear all of the ambience of the jungle in the front channels. As they proceed into the jungle, the ambience level is very delicately raised in the surrounds, so the audience is brought along with the characters into the jungle. There's reverb there, too: It gradually builds up in level from the front channels to the surrounds to envelop you. There's a very specific bird that flies over your head from the left front channel to the right surround channel, localizing things so you're a part of the action. Finally, when the tiger jumps out at you, it's incredibly

sense of sound localization. Even 20 years later, people believe the sound in that opening scene began in the right rear and wound up on the center of the screen and that there was a very discrete pan between those two places. But it couldn't have, because there's no physical way to do that. It depends on your suspension of disbelief.

"But the biggest tip of all is that people always set the surrounds too high, because they believe they should hear those speakers all the time. The right level is set with pink noise and an SPL meter, or at least by ear. You want a seamless blend between the screen and the surrounds on things that are *supposed* to pan smoothly between them. A good test is to abruptly disconnect the rear channels. When you shut off the surrounds, the soundfield should all fall into the screen. That's when they're set right."



SOLID

WHEREVER
THEY
STAND,

THEY'RE

OUTSTANDING.

It doesn't matter where you put them, what you use them for, or how you decide to mount them. Solids perform.

- Why? Because they're acoustically engineered by world-renowned B&W

Loudspeakers. The same people who created the legendary B&W Matrix 801 – the speaker used for nearly eighty percent of all classical recordings.

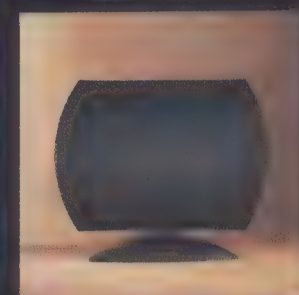
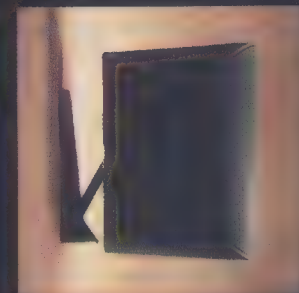
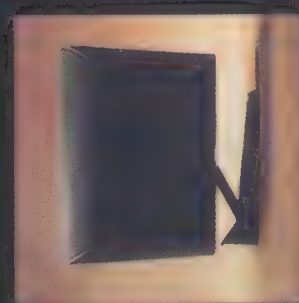
- Solids produce superb, high quality sound that transcends their size and price.

The HCM1, for example, can handle an impressive 150 watts of power. So you can crank up the volume with minimum distortion. It's also magnetically shielded and equipped with

acoustic voice-matching technology. To ensure accurate, true-to-life sound – for music or movies.

- And Solids' clean silhouette and small footprint means they fit into your room without cramping your style. Place them horizontally or vertically on a shelf, floor or table. Even attach them to your wall or ceiling. Then sit back and savor the sound.

- Call 1-800-370-3742 for the name of the Solid dealer nearest you. You'll discover that Solid speakers deliver outstanding performance and value wherever they stand.



SOLID

They play big.

**Rock Solid Sounds
of America**

54 Concord Street

North Reading, MA 01864-2699

1-800-370-3742 TEL

1-508-664-4109 FAX

CIRCLE NO. 49 ON READER SERVICE CARD

Acurus Rated Number One

ACURUS vs THEM

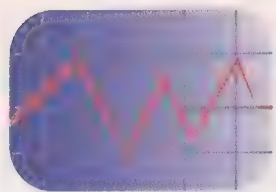
In a twelve amplifier comparison test Video Magazine ranked the Acurus A150 amplifier number one. The Acurus received an A grade in both Sound Quality and Construction! "More importantly, this amp delivered *tons* of punch—significantly more than I expected from a '150-watt' amp. The sound had outstanding dynamic outlines and impact, trap drums and big bass events were impressively rendered. There was also an open, highly detailed, but never harsh character to the sound, with notable depth and 'space'." — *Dan Kumin, Video Magazine*



M O N D I A L D E S I G N S L I M I T E D

20 Livingstone Ave., Dobbs Ferry, NY 10522 • 914-693-8008 • Fax 914-693-7199

CIRCLE NO. 43 ON READER SERVICE CARD



Tower Video

Toshiba's TP61E90 is long on big-screen impact and handy features



TEST
814

SOMETIMES IT CAN BE HARD TO GET A FIX ON THE SIZE OF a projection TV screen. I can tell you that the screen in Toshiba's TP61E90 measures 61 inches, for example, but that information may not really hit home unless you make a comparison—in this case, try taking someone who's about as tall as Danny DeVito and turn him on a diagonal. The 61E90 lists for \$4,495, which places it about midway, pricewise, in the 60-inch arena. That's a lot of money to spend on a TV, of course, but this

set's big screen could change the way you and your family experience movies and other types of programming in the home.

The TP61E90 is also loaded with features that make it a complete home-theater package. The audio system includes an amplifier that's rated to deliver a total of 68 watts, a Dolby Pro Logic decoder, and two standalone rear speakers to complement a pair of built-in speakers. You also get dual-tuner PIP and two remote controls—a universal learning remote, and a simpler model that just handles the main TV action. In

addition, some special features give you an unusual degree of control over the images you watch.

When families are looking for reasons not to buy a set like the 61E90, one of the first things that comes up is the TV's size—a large rear-projector can simply *swallow* a living room. That probably won't be an issue with the TP61E90, though, since its cabinet is amazingly compact. It measures 62.7 x 54.9 x 26.9 inches (h/w/d); Toshiba says its depth makes this the slimmest rear-projector you can buy. The set does weigh a healthy 352 pounds, but

integral casters help it roll easily on hard floors. And as big as it is, it's a nice-looking machine, a combination of charcoal grays and blacks with a storage space underneath the screen that can accommodate two standard-size components.

The front panel sports the set's convergence controls, which are used to align its red, green, and blue guns into a single image. To converge the set, you simply press the TEST button and a crosshair pattern comes up on-screen. Four controls—two each for the red and blue images—let you horizontally and vertically converge these images onto the stationary green image. The front-panel placement of these controls (and the remote's lack of similar controls) makes convergence a two-person job, since it's difficult to see the entire screen when you're close enough to reach them.

The front panel also offers an A/V input set, including an S-Video jack (a nice touch), behind a flip-down door. There's an ANT(enna)/VIDEO input se-

lector, a MENU button for accessing the set's menus, ADV(ance) for scrolling through menus, plus/minus buttons for making adjustments, channel up/down buttons, RESET for restoring the factory settings in their entirety, and an EXIT button for clearing the menus. Finally, there's a knob for input balance, which can be adjusted to lock dialogue into the center channel—useful, potentially, if you hear it leaking into other channels in the Dolby Pro Logic mode.

In terms of system integration, the back panel provides two antenna inputs and one antenna output. There are two A/V input sets, one with an S-Video jack. There's also one A/V output set for hookup to an external receiver or pre-amplifier. Terminals are provided for the supplied rear speakers as well for the external front speakers you may want to add. A slide switch is on hand for selecting whether the rear-projector's internal speakers or external speakers will be used.

Internally, the 61E90 utilizes 7-inch glass/plastic hybrid lenses with a short-focus design; this is what enabled Toshiba to build a cabinet with a mere 27-inch depth. The three guns are reflected onto a lenticular Fresnel screen. The set also has velocity scan modulation, which governs how long the color phosphors are excited according to any given scene's light characteristic. A 3-D comb filter is employed.

As mentioned, the set comes with two remote controls. The universal learning remote is preprogrammed

with codes for VCRs and cable boxes, and it can also be taught the codes of other A/V products. It's well designed and relatively loaded, featurewise, with picture and setup controls hidden under a sliding cover. Many of the important functions sport orange back-lighting, simplifying the use of the remote in a darkened room. The smaller remote simply offers power, channel, volume, mute, and TV/video controls.

The 61E90 offers the standard picture controls plus two others: There's an on/off FLESH TONE circuit, and there are three PICTURE PREFERENCE modes—NORMAL, THEATER, and MEMORY. Both NORMAL and THEATER are

The 3D-Y/C circuit subtly kept the edges of objects within the image clean.

“locked” modes; if you make any adjustment whatsoever to either one, you'll find yourself in MEMORY mode.

The audio menu offers bass, treble, and balance controls as well as speaker-setup choices. The setup menu offers choices for watching TV or cable, automatic channel programming, channel add/erase, and closed-caption options; you can also ascribe call letters to stations. The option menu lets you choose between English, French, and Spanish

BY THE NUMBERS

Measurements by Berger-Braithwaite Labs

Horizontal resolution: >400 lines

Picture S/N: video, 54.3 dB; chroma AM, 63.7 dB; chroma PM, 63.4 dB

Color temperature: before calibration, 11,800° K; after calibration, 6,470° K

Screen brightness: before adjustment, 28.9 fL; after adjustment, 13.2 fL

languages for the on-screen menus, a demonstration mode, and a video noise-reduction circuit.

The option menu also lets you make two unusual adjustments: First, you can adjust the contrast of the PIP image. Second, you can switch the 3D-Y/C circuit on and off; this adjusts the separation between the luminance (black-and-white) and chrominance (color) signals. Proper adjustment improves color quality by keeping the two signals from bleeding into one another; bleeding signals can give colored objects smeared edges.

Fire up the 61E90 and there's no denying that a 61-inch image takes electronic home entertainment to a whole new dimension. Switch the room lights off and spin a laserdisc or a videogame and this set becomes a real attention-grabber. You quickly discover how revealing a screen this size can be; faces and objects that seem distant on a smaller set are up close and personal here. Even flaws in laserdiscs become suddenly obvious.

The 61E90 looked only fair out of the box, though that's pretty common with TVs—and especially with rear-projectors. When you first switch the set on, you find yourself in the NORMAL mode. The CONTRAST control was certainly jacked up here, blues and reds were oversaturated, and I noticed some video noise. Convergence, on the other hand, was good, and the front-panel controls let me do some effective fine-tuning.

The only difference I could find between the NORMAL and THEATER picture modes concerned light output—CONTRAST was set at its maximum with NORMAL and at its midpoint with THEATER. A subsequent check with the color analyzer delineated the difference: With NORMAL, the set was producing a very high 28.9 footlamberts. With THEATER, it was producing a more appropriate 11.6 footlamberts. If you're not interested in fine-tuning the picture controls, stick with THEATER.

In any case, I'd switch off the FLESH

THE SHORT FORM

TOSHIBA TP61E90

Component type: 61-inch rear-projection TV set

Price: \$4,495

Target: Videophiles, movie buffs, and serious home-theater enthusiasts

Minimum requirements*: Hi-Fi VCR

KEY FEATURES

- 61-inch screen ■ Slim 27-inch depth ■ 3D-Y/C separation circuit
- Four-button convergence system ■ Dual-tuner, contrast-adjustable PIP
- Three picture modes ■ Three A/V inputs, including two S-Videos and a front-panel set ■ Variable audio output ■ 68-watt amplifier ■ Dolby Pro Logic decoder ■ Two rear speakers ■ Two remote controls (one universal)

SUMMARY

- A real attention-grabber ■ Very good comb filter
- The Dolby Pro Logic sound system delivers solid entertainment
- An image this size can change the way you experience movies

Circle 110 on reader service card

**To maximize its potential*

TONE circuit, since it tends to average out subtle gradations within a single hue. I also didn't like the filtering effect of the video noise-reduction circuit, so I switched it off, too. The 3D-Y/C circuit proved useful, however: After giving it a workout with test patterns, both technical editor Lance Braithwaite and I felt that it had a positive, though subtle, effect on images.

The *A Video Standard* test laserdisc enabled me to take the full measure of the 61E90. Gray scale had good gradation, with a shift toward red in darker shades. There was a fairly bright reflection that had a red cast to it; this type of reflection appears to a greater or lesser degree in every rear-projector I've seen. Colors were fairly accurate, with a slight orange cast to yellow and a pink quality to magenta. There was no dot crawl, however, and edges were well defined. Detail was very good in all frequencies. Side-to-side uniformity was remarkable for such a big screen. I also felt that the 61E90 allowed a good variety of viewing angles. There was some light leakage on the left edge of the screen. The set had good geometry and a typical amount of overscan. The resolution chart showed over 400 lines horizontal and 480 lines vertical.

To get the most accurate images, I moved to the MEMORY picture mode and started fine-tuning using AVS. I set CONTRAST and SHARPNESS to their one-quarter marks, BRIGHTNESS to its two-thirds mark, COLOR to its one-third mark, and TINT three clicks up from its midpoint.

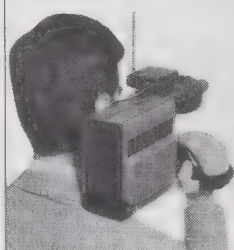
Kevin Miller, VIDEO contributor and TV calibrator, found the 61E90 simple to calibrate. Color temperature measured 11,800 degrees Kelvin at high output and 6,100 degrees at low output; the discrepancy explains the red shift to the gray scale. CONTRAST now measured 5.3 footlamberts, however, which is unacceptably low. After calibration, color temperature measured 6,470 degrees Kelvin at high output and 6,750 degrees at low output. Finally, we reset CONTRAST to its midpoint, which resulted in a light output of a respectable 13.2 footlamberts. Though this setting exceeds the linear abilities of the set's power supply, it's still preferable to the NORMAL mode setting; the downside is that overdriving the power supply will shorten its lifespan.

At this point, our reference laserdiscs looked very good. *Forrest Gump*, *The Abyss*, and *T2* all proved very involving

and looked sharp and detailed. Video noise was rarely apparent. Daylight scenes were naturally bright, but there was still detail in dark scenes. Combine this image with the set's Dolby Pro Logic sound system and supplied rear speakers and you have real theater impact. Though I'd still add an external surround-sound system, the 61E90 delivers the goods all by itself.

TOSHIBA HAS DONE A VERY GOOD JOB

with the TP61E90. Its 61-inch image has tremendous impact, and the set's slim cabinet makes it very flexible. There's a big-bore audio system on hand if you don't have room for, or aren't interested in, a separate surround-sound system. In addition, the set is easy to use, and it offers a number of interesting features with both convenience and performance in mind. If you're primed to go big, the TP61E90 delivers plenty of bang. ■



AZDEN QUALITY SOUND LETS YOU GET THE WHOLE PICTURE.

Your camcorder's built-in microphone picks up sounds from all directions, including those you don't want. When shooting from a distance you can't record your subject's voice clearly. Azden, the leader in professional microphones for videography, offers a full range of options to make your sound as good as your pictures.

"PRO" series wireless microphones:

- Powerful VHF professional wireless systems with a range of over 300 feet.
- 2 Switchable frequencies for noise-free performance.
- Belt-pack transmitters (WLX, WMS).
- Miniature receivers with supplied shoe mount and velcro.

WMS-PRO: Comes with 2 mics (lapel and handheld) which plug into the transmitter.

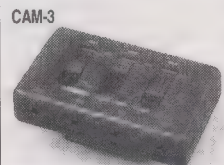
WHX-PRO: Wire-free handheld mic with built-in transmitter.

WLX-PRO: Lapel microphone system.

CAM-3: A mini 3 channel mixer for recording sound from 3 add-on-mics, while you're shooting. Only 2-1/8" x 3-1/4" it can be attached to your camera or clipped to the handstrap. Needs no batteries. Cables included.

HS-7V: Headset with boom mic for adding narration as you shoot. Also use it to monitor sound you're recording.

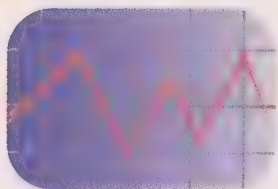
ECZ-990: A 7" long directional mic. Zoom in on your subject's voice, reducing side noises. Range 35-40 feet.



AZDEN®

147 New Hyde Park Road, Franklin Square, NY 11010
(516) 328-7500 FAX (516) 328-7506

Distributed in Canada by GENTEC



VIDEO TEST



THXcitement

**Technics' new
THX receiver
pays off large**

**TEST
815**

IF I WERE TO PICK A METAPHOR FOR TECHNOLOGY IN THE '90s, it'd be a runaway train. There are fringe benefits to rapid-fire advances, of course—one of them being that, from year to year, components tend to get both better and more affordable. This paradoxical state of affairs is rife in the world of consumer electronics: 1985's \$2,500 CD player now costs about \$100 in 1985 dollars—and outperforms its predecessor by leaps and bounds. But you don't have to wait a decade to get in on the fun:

Technics' SA-TX1010, the company's new THX-certified A/V receiver, both outdoes and undercuts their initial THX effort, the SAX-T1000.

The TX1010 offers more refined features, an improved on-screen user interface, and a 15 percent lower price tag—\$999 to the T1000's \$1,200. In the process, the TX1010 retains the same high power (in Pro Logic mode, 120 watts x 3 plus 60 x 2, 0.8% THD at 1,000 Hz, 6 ohms) as well as the honor of being the most economical entry to the once-exclusive world of THX.

I liked Technics' T1000 when I evaluated it over a year ago, and the new

model is mo' better. For a "flagship"-status design, the TX1010 is relatively compact (just a bit over 6 inches tall) and has a comparatively simple layout. A duo of big knobs provides master volume and radio tuning, the latter using an unusual—and rather cool—jog-type system: When the auto-tuning mode is selected, a slight turn right or left initiates a scan up or down the radio dial, respectively, for the next tunable station; in manual mode, the knob spins like a "real" one. Smaller knobs provide bass, treble, and balance adjustments (disabled in the surround-sound modes), while a relatively mod-

est number of smaller and larger buttons commands tuner-preset, source, surround-mode, and A-B speaker selection; there's also a headphone jack.

Technics endowed the TX1010 with an equally simplified input/output complement. There's just one full grouping of in/out A/V jacks (VCR1) plus two input-only sets (VCR2 and LDP); VCR2 is duplicated by a front-panel set with an adjacent switch to select front- or rear-panel origins. The VCR1 and LDP positions get both composite and S-Video inputs, as do the MONITOR and VCR1 record-out outputs. This arrangement will serve setups that include, say, one laserdisc player, one recording VCR, and a satellite system, videogame, or other play-only A/V component.

Audio-only inputs are also basic: CD plus a full input/output tape-monitor loop. (An interesting reality bite: The TX1010 has dropped the T1000's TAPE/DCC legend for the tape loop in favor of just TAPE.) Speaker connections are made via seven pairs of the aggravating sort of terminals that, despite their "five-way" appearance, don't ac-

cept banana plugs, only bare wire or spade lugs. To its credit, however, the receiver provides line-level output jacks for each channel, leaving the upgrade door open for the addition of external power amps. The output set includes a line-level subwoofer jack, which is low-pass filtered at the THX-standard 80 Hz; a corresponding high-pass filter rolls off the front left/right speaker outputs (and, presumably, the line-level outputs) when the adjacent SUBWOOFER switch is set to ON.

To give the TX1010 a run for your money, I added it to a relatively high-end home-theater system, where it replaced five 100-watt power amp channels and a THX-certified preamp/surround processor in driving a well-balanced, full-range suite of more or less average-sensitivity B&W speakers. Source components included a laserdisc player, a CD player, a DSS satellite system, and a VHS Hi-Fi VCR, with video displayed on a 31-inch direct-view set.

The TX1010's simplicity and relatively roomy rear-panel layout made setup a pleasure compared to the cramped, fussy facilities of many A/V receivers—the sole exception being

those hateful speaker terminals. The receiver also proved easy and intuitive to operate, though its rather small front-panel graphics were difficult to read.

The on-screen displays aren't at all fancy, but their basic layout and simple content communicated the necessary information. The TX1010's unusual HELP key informs you via on-screen messages, which also scroll across the front-panel display, of simple-minded oversights such as forgetting to select speakers; the system even automatically displays "*Please Press the Help Key*" when you do something dumb. (Don't ask how I know.)

The full-function remote control is plainly arranged and simple to manage, offering basic commands for VCR, television, LD player, and audio-tape operations in addition to the receiver itself. The remote can be reprogrammed for other-brand components (TV, LD, and VCR), though the list is limited to the more common brands; if you have an obscure TV (as I do), you'll be stuck with multiple remotes.

As a plain-vanilla stereo receiver, the TX1010 was impressive. Its main power amplifier circuits, which employ Technics' "Class H+" topology—a sort

of "smart," headroom-rich layout engineered to maximize amplifying efficiency from a compact and low-heat package—proved to have outstanding dynamic ability, bottom-end punch, definition, and finesse. The receiver easily drove B&W 803-II towers to concert-hall levels without appearing to breathe hard in the process.

Radio performance was good, too. FM reception was above average, with good pulling-power on weak signals and clean, dynamic reproduction with strong stations. The TX1010 wasn't quite as adept at suppressing background hiss as the best separate tuners, but, overall, FM reproduction was musical and solid. AM results, however, were plainly mediocre.

Video pass-through quality was fine as well: I couldn't detect any obvious difference between LD images with and without the TX1010 in the loop.

The receiver's surround-sound capabilities are the big draw here, of course. Movie-mode settings are confined to Dolby Pro Logic, THX's enhancement of Pro Logic, and 3 STEREO (Pro Logic with the surround channel mixed to the left/right speakers, for systems that don't employ rear speak-



Canon's Wide Dispersion Sound Loudspeakers are anything but conservative. They're a true revolution in sound. And one that is destined to change the way you listen to music or movies at home.

Take, for example, our S-25s and S-35s.

Designed and built in the U.K., these uniquely engineered speakers use a system of firing sound onto a specially designed acoustic mirror to produce a

stereo listening area — a sweet spot — far greater than that of ordinary speakers. The end result is that now, more people can enjoy the same great stereo sound.

Our Wide Dispersion Sound Loudspeakers come with a wide array of options too. In addition to our S-25s and S-35s, we offer our SV-15 speakers which can be used

with your stereo or as part of a complete home theater system. Our S-C10 and S-C20 Centre Channel Speakers, with their unique two-way design, are perfect for dialogue reproduction. And our S-B20 Sub-Bass Speaker brings plenty of bass to your music or to those deep home theater sound effects.

To learn more about the perfect candidate for speaker of your house, call us at 1-800-OK-CANON.

**WIDE
DISPERSION
SOUND**

Canon



AVS-780
Accommodates 40"
Direct View TV or 45" Table
Top Projection TV



AR-880
Audio Video System
five adjustable shelves



B-201C
Accommodates up to 27" TV

HOME THEATER SYSTEMS BY

BELL'OGGETTI™



Bell'Oggetti International Ltd.

711 Ginesi Drive

Morganville, NJ 07751-1250

Tel (908) 972-1333

Fax (908) 536-6482

BELL'OGGETTI



CABLE MANAGEMENT SYSTEM



WU 810

AL•Palm Audio Video **AZ**•Buzz Jensen's, Hi Fi Sales, Jerry's Audio Video **CA**•Anderson's TV, Audio Video City, Century Stereo, Electronic Safari, Good Guys, Laser City, Superco Audio Video **CT**•Al Franklin's, County TV & Appliance **FL**•Palm Audio Video, Sound Advice, Stereotypes **GA**•Hi Fi Buys, Laserdisc **HI**•Sam Sung **IA**•Traviss TV & Electronics **IL**•Abt TV, Columbia Audio Video, Douglas TV, Good Vibes, United Audio Centers **IN**•Ovation Audio Video, Sound Pro **LA**•Mel-O-Sounds, Trotter's Electronics **MD**•Pro Video **MI**•Audio Video System, Gramophone, Stereo Showcase **MN**•Audio King **MO**•Hi Fi Fo Fum **NEW ENG**•Cookin', Huntington TV, Tweeter **NC**•Audio Video System **NY/NJ**•Atlantic Stereo, Film & Music, Harvey's Electronics, J & R Music World, Sixth Avenue Electronics, Stereo Exchange **OH**•New Image Electronics **OK**•Audio Dimensions, K-Labs, The Phonograph **PA**•Bryn Mawr Stereo, Hi Fi House **PR**•Bonnin Electronics **TN**•Audio Video Environments, Hi Fi Buys, Statement Audio Video **TX**•Colonel Video & Audio, Don's Hi Fidelity, Home Entertainment, Soundquest **WA**•Magnolia Hi Fi **WI**•Flanner Audio Video

CIRCLE NO. 78 ON READER SERVICE CARD

ers), a truly welcome simplicity. The TX1010 adds three "SSI" (Sound Stage Imaging) modes, however; they work with any source and don't require Dolby encoding.

Surround setup and level calibration were straightforward and quick: After using an SPL meter to balance output levels for all five speakers at the prime listening position, I found that the TX1010 stayed balanced over most of its master-volume range (+1 dB within about 10 dB of the "THX-Reference" volume setting). The exception was when I turned the volume knob to a very low setting; at about 20 dB below Reference, the surround outputs lagged behind the front speakers by 2 to 3 dB. This shouldn't prove troubling unless you habitually listen to surround-sound programs at very low levels.

At real-world levels, the TX1010's performance was truly first-rate. Balance, smoothness, and "steering" of effects were all excellent, and the receiver managed complex scenes with good detail and freedom from overload. Dialogue leakage was infrequent and, equally important, very constant in terms of dynamic and frequency content; it shouldn't prove noticeable. Simply put, Pro Logic and THX performance were excellent.

The TX1010 was also superbly quiet: I never heard noise emanating from the surround speakers in either DPL or THX mode, and the front channels were even more pristine. In short, the TX1010 was clearly quieter than many A/V receivers.

It also had more than ample power for theater-level movie viewing in my average-size living room. Even the surround channels had remarkable headroom (for a receiver), driving my dipole surrounds with ease. And the TX1010 stayed together when I pushed the volume level up to the maximum I use for real-world movie playback in my living room. Overall, it's impressive on the power front.

As with other THX processors I've evaluated, the TX1010's THX mode admirably reduced the unwelcome brightness you get with most movie soundtracks and provided a decidedly more open, spacious, and lifelike ambient soundfield (thanks to THX re-equalization and surround-decorrelation, respectively).

But I also noted that characteristic "flangey" quality that THX can impart to the surround channels. This is an artifact of THX's decorrelation circuitry, which synthesizes stereo effects via pitch shifts. You won't hear anything amiss with most movies, though soundtrack music that employs strong piano, harp, or other steady-toned acoustic sounds will be obviously colored. In this, the TX1010 was no better or worse than most value-priced THX components I've evaluated; switching to plain-vanilla Dolby Pro Logic eliminated it altogether.

I was less impressed with the three SSI modes. They seem to be a basic matrix-surround mode, a duplicate with greater delay and stronger surround-channel output, and another clone with

BY THE NUMBERS

Measurements by Start Labs

DPL power (maximum, at 1,000 Hz, 1% THD plus noise, one channel driven): main, 133 watts into 8 ohms, 198 into 4 ohms; center, 131 into 8 ohms, 198 into 4 ohms; surround, 82 into 8 ohms, 128 into 4 ohms

Stereo power (maximum, at 1,000 Hz, 1% THD plus noise, both channels driven): 116 watts into 8 ohms, 168 into 4 ohms

DPL-mode dynamic power: main, 155 watts into 8 ohms, 220 into 4 ohms; center, 150 into 8 ohms, 214 into 4 ohms; surround, 89 into 8 ohms, 132 into 4 ohms

DPL channel separation (at 1,000 Hz, 1-volt input): front right/front left, 39 dB; front left/front right, 40 dB; center/front left, 31 dB; center/front right, 30 dB; rear/front left, 36 dB; rear/front right, 37 dB; front left/center, 49 dB; front right/center, 50 dB; rear/center, 58 dB; front left/rear, 44 dB; front right/rear, 42 dB; center/rear, 45 dB

DPL THD plus noise (at rated power into 8 ohms): main, 0.06%; center, 0.07%; surround, 0.09%

DPL S/N (A-weighted, referenced to 1 watt, 8 ohms): main, 83 dB; center, 79 dB; surround, 74 dB

DPL frequency response (at 1 watt): main, 20–20,000 Hz +0, –3 dB (at 20 Hz); center, 20–20,000 Hz +0, –2.5 dB (at 20 Hz); surround, 40–7,500 Hz +0, –3 dB

Video insertion loss: 0.2 dB

Picture S/N: unweighted video, 60.2 dB; weighted video, 60.7 dB; chroma AM, >75 dB; chroma PM, 63.1 dB

the addition of center-channel steering and reproduction via the center speaker. I didn't find much use at all for the second mode; the first and third modes yielded pleasant and acceptably natural spaciousness with certain kinds of music (strings, choir, and small-ensemble chamber and jazz). Unfortunately, all three modes apparently employ a version of THX-type decorrelation and were therefore marred by the same flanging artifact as the THX mode—though they made rock music sound pretty cool.

HOME-THEATER BUILDERS INTRIGUED BY the promise of THX will be happy to learn that Technics' SA-TX1010, the most affordable gateway to THX sound, is a fine value: You get serious five-channel power, excellent Dolby Pro Logic and THX surround performance, integrated A/V source selection and control, a sensible control layout, a clean remote control, and an honestly usable FM section. This type of performance could only be gained at twice the TX1010's cost a year or two back. Ain't progress grand? ■

THE SHORT FORM

TECHNICS SA-TX1010

Component type: THX-certified A/V receiver

Price: \$999

Target: Movie buffs and serious home-theater enthusiasts

Minimum requirements*: A 27-inch TV, Hi-Fi VCR, main, center, and surround speakers

KEY FEATURES

- THX decoding ■ Dolby Pro Logic decoding ■ Rated to deliver 120 watts x 3 plus 60 x 2 into 6 ohms ■ Class H+ amplifier topology ■ On-screen displays
- Four A/V inputs, including two S-Video inputs ■ Line-level outputs for each channel ■ Filtered line-level subwoofer output ■ Three Sound Stage Imaging modes ■ Universal remote

SUMMARY

- Straightforward design ■ Simple to set up ■ Easy to operate ■ Impressive power
- Superbly quiet ■ First-rate THX and DPL performance at real-world levels
- THX quality for a very reasonable price

Circle 111 on reader service card

**To maximize its potential*



ENGINEERING THE
WORLD'S FIRST 80" DIAGONAL PROSCAN TV
WAS A TALL ORDER.



Presenting the
world's largest

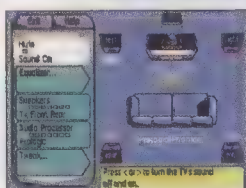
rear projection television: the incredible
new ProScan 80" diagonal. *New advanced 9"*
tube/optics system (compared to 7" tubes in

Advanced 9"
optics drive the
brightest picture
that ProScan
TV has ever
produced.



conventional projection
sets) propel a picture
that's over 50% brighter
than previous 7" designs.

That's an industry first. And a ProScan
exclusive. But that's just for starters. Because
a new *improved wideband*
amplifier combines with
61 watts to deliver unpar-
alleled picture power. And
with improved ProScan
audio, there's sound to
go with the fury: a room-
shaking system that



The friendly new graphical user
interface makes ProScan easier
than ever to navigate.

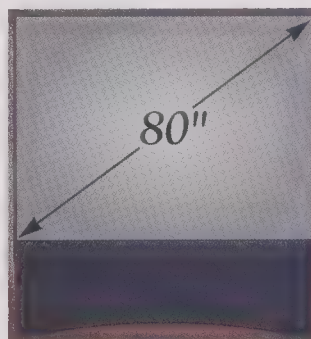
catapults the built-in *Dolby[®] Pro Logic*

Surround System to new



heights (as well as depths). But don't let all this

power fool you. ProScan also boasts



ProScan 80" diagonal PS80690

There's never been a bigger—or better—ProScan.

a friendly new *bit-mapped graphical user inter-*
face with point-and-select simplicity that rivals
the helpful graphical icons of today's personal
computers. And new digital
technology in the ProScan tuner
allows *PIX+ Twin Tuner™ Picture-in-*
Picture effects, including *Picture-Outside-*
Picture and *Split-Screen*.

If you're tired of TV performance claims
that generate more heat than light, you owe
yourself a look at the bright new ProScan
Projection TV. The reviews—like the picture—
are glowing.



The new ProScan
Simple Remote
makes today's
most advanced
technology
easy to
grasp.

PROSCAN[®]
So advanced. Yet so simple.

AN RCA ENTERTAINMENT PRODUCT

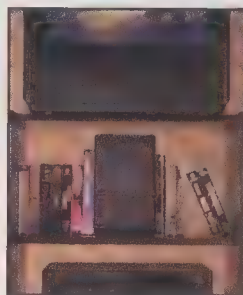


The high performance 6 piece M Home Theater Solution at \$999.*

The Matched Home Theater System that fits anywhere. Even in your budget.

"If you want the dynamics of high performance home theater...but you don't want to design your home around big home theater speakers, nor do you want to spend thousands of dollars and your entire weekend in a store trying to mix and match a system, then you'll understand why we designed the M Home Theater Solution." *Matthew Polk*

The performance will positively astound you. Five matched Polk M3's provide bigger than life, seamless



The M3[®] Video center channel speaker can be placed anywhere above, below or beside your TV without discoloring your picture since it is magnetically shielded.

surround sound while our powered subwoofer rattles your windows. Thanks to the M3's unique shape and built-in bracket and the subwoofer's compact size, M Home Theater is guaranteed to fit your space and decorating requirements (available in black and white). And at \$999, you'll love the way it fits your budget.

For more information call 1-800-377-POLK, or dial our toll-free dealer locator at 1-800-992-2520 to find your nearest authorized Polk Audio dealer.

Dealer Locator Number

1-800-992-2520
Ad code: 60009

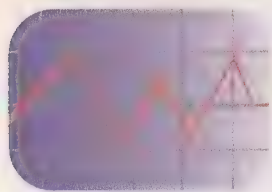
polk audio
The Speaker Specialists[®]

5601 Metro Drive, Baltimore, Maryland 21215 USA (410)358-3600.

CIRCLE NO. 50 ON READER SERVICE CARD

"Polk Audio", "The Speaker Specialists" and "Dynamic Balance" are registered trademarks of Polk Investment Corporation used under license by Polk Audio Incorporated.

*Manufacturer's Suggested Retail Price. Dealer pricing may vary.



'Vox Populi

**Magnavox's TP3272
32-inch TV set
defies its budget status**



**TEST
816**

SHOPPERS LOOKING TO BUY A 32-INCH TV SET HAVE A LARGE number of models to choose from, with prices ranging from under \$1,000 up to \$3,000 and more. Though the more affordable sets usually cut back on convenience and technical features as well as connections, it's remarkable how subtle the differences in image quality can be from one end of the price spectrum to the other. Magnavox's affordable TP3272 makes a compelling case for frugality: It delivers a very good picture and

incorporates some uncommonly useful features.

The 3272 (\$900) is a tabletop set, so cosmetically it's unobtrusive and minimalist. It has basic styling and comes in the conventional charcoal gray. Its size and weight—27.1 x 30.6 x 20.8 inches (h/w/d) and 115 pounds—are on the small side for a 32-inch set. Two small speakers are built into each side of the chassis.

Given its budget status, you can't expect bells and whistles, and you don't get them—but you do get Magnavox's trick Smart Sound, Smart Picture, and Remote Locator features. Other familiar offerings include a single-tuner PIP function and a sleep timer; the size and

position of the PIP window can be changed, and the PIP image can be swapped with the main image via the remote control. The 3272 also offers Smart Help, an on-screen instruction guide delivered in English, Spanish, and French, and a memory register for your four favorite channels; once you've programmed this register, you can get to them with the touch of a remote button.

Smart Sound is an extremely clever feature. Basically, it minimizes one of the most annoying things about TV commercials: the way their average sound level exceeds that of the show they're interrupting. To get a fix on this, I used an SPL meter to measure the

sound level on a show with the 3272's volume set at the middle position; I got an average reading of 68 dB. At commercial time, the meter peaked at 72 dB. Four dB may not seem like much, but it's easily discernible and can be very disturbing. When I turned on Smart Sound, commercials peaked at only 1 dB above the show, and that's a difference you're not likely to notice. This is a major improvement and a very nice feature.

Smart Picture lets you change the 3272's PICTURE (contrast), COLOR, and SHARPNESS levels as a group to help optimize the image for different source material (broadcasts, tapes, or discs) and different ambient lighting conditions. Smart Picture options include SPORTS, MOVIES, WEAK SIGNAL, and GAMES (more on this feature in a bit).

The Remote Locator does exactly what its name implies. If you can't find the remote control, simply power up the set using the front-panel button—the remote will beep for about 45 seconds. That should give you plenty of time to track it down.

The 3272 includes a "flat" square

picture tube, whose 100-percent angle of deflection is said to deliver optimum contrast. It also employs an Invar mask, which helps the set maintain good color at high brightness levels. Black Stretch circuitry is said to enhance subtle shadings in dark scenes. A standard analog (glass) comb filter is on hand.

Back-panel connections are on the light side, as they usually are on budget sets. There's one composite-video and one S-Video input, one set of stereo audio inputs, and one set of stereo audio outputs. The S-Video input produced a slightly sharper and more detailed picture than the composite input.

Unfortunately, the 3272 only has one antenna input, which could be a hassle if you want to receive some combination of cable, broadcast, and satellite signals. And there's no front-panel A/V input set for convenient hookup of a camcorder or game console.

The remote control is a simple affair, but it's not terribly well designed. Its buttons are on the small side, making it a little awkward to use. And there's no back-lighting whatsoever, though that's unsurprising with a set in this price range. The remote will control 58 brands of VCRs and 30 brands of cable boxes, however.

The on-screen graphics are fairly intuitive. Unlike many menu systems I've seen, they aren't confusing in the slightest, and that means that operating the 3272 is simple.

The picture looked remarkably good out of the box, as I discovered while watching the THX-approved *The Abyss*

laserdisc with Smart Picture set to MOVIES. The picture seemed to be almost perfect in terms of brightness and contrast. Colors looked very good, without the gross oversaturation you often get when you rely on factory picture settings. And skin tones looked exceptionally natural, indicating that there are no auto-tint or auto-color circuits at work.

Analysis with the *A Video Standard* test disc revealed good gray-scale delineation, which shows that the 3272's

The picture seemed to be almost perfect in terms of brightness and contrast.

power supply is capable of accurately controlling light output at different output levels. Though the other picture settings needed a bit of adjustment, only SHARPNESS needed a major push. The color decoder was causing reds to oversaturate a bit. Convergence was excellent. Overscan, at only 2 to 3 percent, was as good as I've ever seen; this means that you're seeing virtually all of the viewable image (the very top portion of broadcasts includes the vertical blanking interval, which you don't want to see, so some overscan is always necessary to keep it out of the picture). Resolution with a laserdisc

BY THE NUMBERS

Measurements by Berger-Braithwaite Labs

Horizontal resolution: >400 lines

Picture S/N: video, 53.7 dB; chroma AM, 62.2 dB; chroma PM, 62.6 dB

Color temperature: before calibration, 11,000° K; after calibration, 6,700° K

Screen brightness: before adjustment, 70.5 fL; after adjustment, 22.2 fL

source measured a solid 400 lines horizontal and 480 lines vertical.

With the SPORTS mode, the PICTURE (contrast) setting was much too high. This severely overtaxes the power supply and virtually eliminates any detail you might see in darkly lit scenes. I'd use this setting only if you're watching in a brightly lit room and can't do anything to darken it.

Using AVS and the MOVIES mode, I brought COLOR and BRIGHTNESS one click down from their factory positions and left TINT where it was. Reducing PICTURE to four clicks up from minimum produced 22.2 footlamberts of light; this is good linear performance for a tube this size.

Color temperature was another story. Measurements resulted in a reading of 11,000 degrees Kelvin, well above the industry's D6500 standard. The 3272 shouldn't prove difficult for a qualified technician to calibrate, however. When all was said and done, the set ranged from 6,580 to 6,700 degrees on the gray scale. The set also tracked the gray scale quite well. After calibration, colors were dead-on accurate.

There's not much to talk about concerning the 3272's sound quality. Its two little speakers don't put out much sound, and what's there doesn't smack of hi-fi. But that really shouldn't be a problem: You can't expect big sound from an inexpensive TV—and the audio systems in even the best TVs can't keep up with even a modest surround-sound system.

MAGNAVOX'S TP3272 IS A FINE 32-INCH set. Given its price, it has more practical and useful features than you might expect. And its picture is very good when the MOVIES mode is selected. The only possible drawback is the limited number of connections, but this set is clearly designed for use in systems where that isn't a problem. If you're looking for great performance and an outstanding value in a 31- or 32-inch set, the TP3272 is a must-see. ■

THE SHORT FORM

MAGNAVOX TP3272

Component type: 32-inch direct-view TV set

Price: \$900

Target: Movie buffs and serious home-theater enthusiasts

Minimum requirements*: Hi-Fi VCR, A/V receiver, main, center, and surround speakers

KEY FEATURES

- Invar mask ■ Flat square picture tube ■ Black Stretch circuitry
- One A/V input set, including S-Video ■ Smart Sound volume controller
- Smart Picture modes ■ Single-tuner PIP ■ Universal remote control
- Remote Locator function

SUMMARY

- Looked remarkably good in the MOVIE Smart Picture mode
- Produced natural skin tones ■ Convergence was excellent ■ Intuitive graphics menu
- Simple to calibrate ■ The Remote Locator and Smart Sound functions are truly useful ■ Short on inputs ■ An outstanding value

Circle 112 on reader service card

**To maximize its potential*

**"THIS SYSTEM EMBARRASSES MANY
HOME THEATER SPEAKER COMBOS
COSTING SEVERAL TIMES ITS PRICE"**

Corey Greenberg, Home Theater Technology, Volume 2, No. 7



6 Product of the
Year Awards
in the past year

16 Editor's Choice
Awards in the
past year

60 Award
class 1999

\$1,546*

gets you this stunning

home theater system consisting of:

MiniMk3, CC-300, ADP-150, and PS-1000.

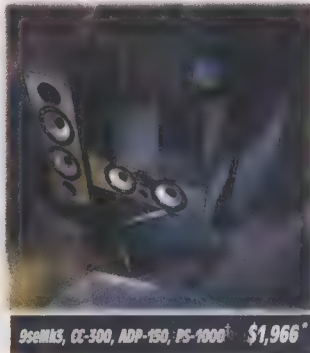
Spectacular performance from Paradigm...
the number one choice for critical listeners!



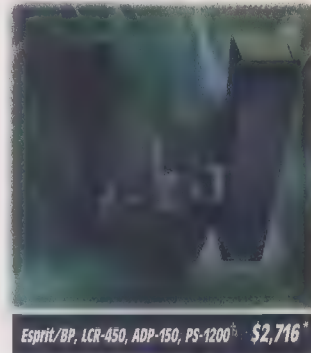
Atom, CC-50, Micro, PDR-10† **\$796***



Titan, CC-150, ADP-100, PDR-10† **\$1,076***



950Mk3, CC-300, ADP-150, PS-1000† **\$1,966***



Esprit/BP, LCR-450, ADP-150, PS-1200† **\$2,716***

Paradigm®
ENGINEERED FOR BETTER SOUND

Paradigm's advanced R&D and superior component technology yields the ultimate in home theater sound. Visit your nearest **AUTHORIZED PARADIGM DEALER** and listen to any of these sensational systems today!

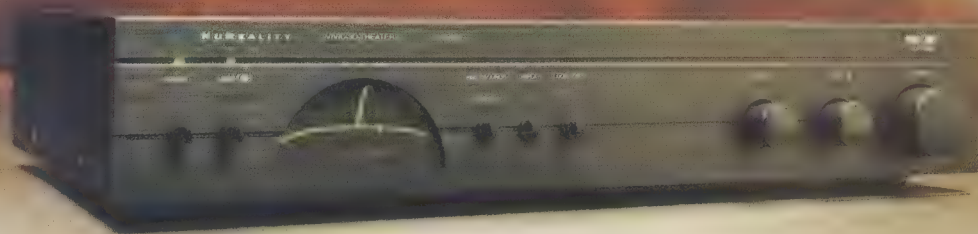
For more information on other fine Paradigm speakers visit your nearest **AUTHORIZED PARADIGM DEALER** or write:
AUDIOSTREAM, MPO Box 2410 Niagara Falls, NY 14302 (905) 632-0180
In Canada: PARADIGM, 101 Hanlan Rd. Woodbridge, ON L4L 3P5 (905) 850-2889

*Manufacturer's FMV retail price.

†All systems shown include a powered subwoofer.

CIRCLE NO. 46 ON READER SERVICE CARD

If Your Ears Had Lips They'd Kiss You



Music to Your Ears

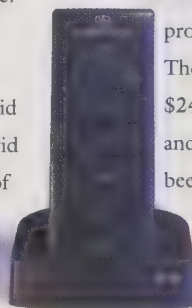
Once you hear 3D surround sound from the Vivid 3D Theater, you won't want to listen to plain old stereo again. Thanks to patented **SRS (●)®** technology, the Vivid 3D Theater from NuReality retrieves actual ambient information lost by traditional stereo processing. NuReality takes advantage of this technology to bring you true-to-life three-dimensional surround sound from only two speakers. Vivid 3D™ sound enhancement products bring all your movies, sound tracks and recordings to life.

DEMO CD FOR FREE!*



Multiple Speakers

Although you only need two speakers and the Vivid 3D Theater to create 3D surround sound, the Vivid 3D Theater also adds an entirely new dimension of realism to multiple speaker combinations.



Like the Vivid 3D Theater, the award-winning Vivid 3D Studio adds a new level of audio excitement to portable stereo systems.

Easy to Install

The Vivid 3D Theater is easy to install with your existing audio system. You can enhance virtually any audio configuration including DSS, VCRs, TVs, receivers, tape decks, FM radios, CD and laser disc players. In addition, the Vivid 3D Theater is fully compatible and compliments Dolby Pro Logic®.

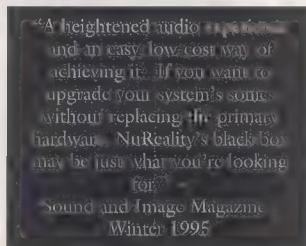


RETAIL VISION®
1994 Winner
Best Product



Surprisingly Affordable

NuReality offers a complete family of affordable Vivid 3D products. The Vivid 3D Theater retails for only \$249.95. Call today to order, and begin to hear what you've been missing.



1-800-501-8086



CIRCLE NO. 63 ON READER SERVICE CARD



NUREALITY®
2907 Daimler St. Santa Ana, CA 92705
714-442-1080

<http://www.nureality.com>

*This specially recorded CD recreates the experience of 3D sound from any CD player and is available for a \$5.95 shipping and handling charge which is fully credited toward the purchase of a Vivid 3D system. This offer applies only to Vivid 3D products purchased directly from NuReality. Freight charges, duty or VAT are not included for International orders. All rights reserved. NuReality and the NuReality logo are registered trademarks of NuReality. SRS and the SRS logo are registered trademarks of SRS Labs. All product names are trademarks or registered trademarks of their respective holders. © 1995 NuReality.

second coming ►

RCA's second generation of DSS components is lead by their top-of-the-line DS7430RA package (\$999). It includes a dish, a receiver, and a new 16-color on-screen display. The dish features two LNB outputs, and the receiver has two sets of A/V outputs, an S-Video output, and wide-band and low-speed data ports. A 39-button universal remote control is supplied. *Circle 113 on reader service card*



◀ configure 8

Parasound's HCA-806 power amplifier (\$1,150) can be configured to drive six, five, or four channels. The amp is packed with the same circuitry featured in Parasound's higher-end HCA-1206. It's rated at 80 watts x 6 rms into 8 ohms when all channels are driven. Six gold-plated five-way binding posts as well as six gold-plated Tiffany-style RCA jacks are on tap. *Circle 114 on reader service card*

spin cycle ►

Marantz's LV-520 combi-player (\$800) is equipped with a dedicated AC-3 output. The 520 offers dual-side play and spins six types of discs (12- and 8-inch LDs, 8-inch LD singles, 5-inch CD-Vs, and 5- and 3-inch CDs). Digital picture and color-correction circuitry as well as a color-dropout compensator are employed. Side changes are said to take 10 seconds. *Circle 115 on reader service card*



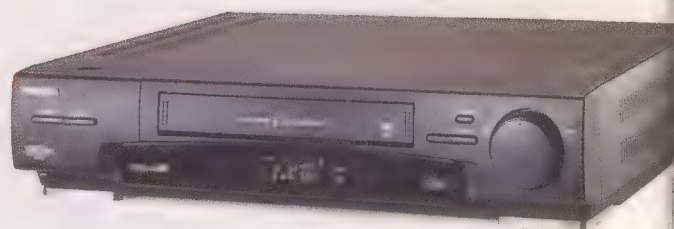
◀ mini theater

Kenwood's UD-753 A/V mini-system (\$1,000) has a Dolby Pro Logic decoder and five speakers. In DPL mode, the 753 is rated to deliver 80 watts to each main speaker, 10 watts to the center, and 3 watts to each surround. The 753 has two video inputs and 1 video output; sources include a CD changer, a dual-well tape deck, and an AM/FM tuner. *Circle 116 on reader service card*



chromatically correct ►

Toshiba attacks horizontal color bleeding in their six-head M-761 Hi-Fi VCR (\$499). By detecting transitions between segments of the color signal, straightening the edge waveform, and shortening the transition time, the 761 is said to produce less color overlap and an overall improved picture. VCR Plus+, cable-box control, and a universal remote are on tap. *Circle 117 on reader service card*

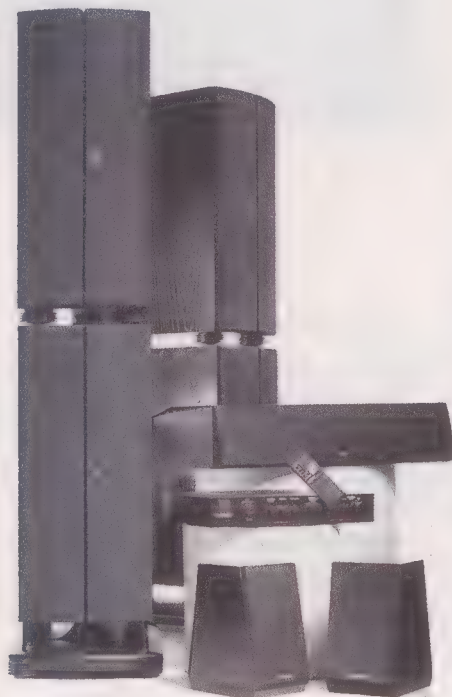


◀ ac-3's company

ProScan's PSLD46 combi-player (\$599) features an AC-3 output, dual-side play, a digital comb filter, a shuttle-equipped wireless remote control, gold-plated RCA outputs, two S-Video outputs, and an optical digital-output terminal. A separate tray for CD playback, intro scan, 24-track programmable playback, and a program/track/side repeat mode are included. *Circle 118 on reader service card*

mission: control ►

Fisher's PC-5531 31-inch TV (\$950) addresses objectionable TV programming with a parental-lock function that allows up to 3 channels to be blocked for a total of 9 hours. Single-tuner PIP, 600-line resolution, surround-sound circuitry, and a 181-channel cable-compatible tuner are onboard. *Circle 119 on reader service card*



◀ reference upon request

Polk's Signature Reference Series home-theater speaker package (\$8,500) includes two powered subwoofers (each with two 10-inch woofers) that double as pedestal stands for the main speakers. The mains feature four 5.25-inch mid/woofers and one 1-inch dome tweeter. The horizontal center speaker has four 5.25-inch mid/woofers and one 1-inch dome tweeter. The dipole surrounds employ two 4.5-inch mid/woofers and two 1-inch dome tweeters. Power handling is given as 1,000 watts across the front and 100 watts to each surround. *Circle 120 on reader service card*

Movie Buffs, Audiophiles, Tightwads, Lend Us Your Ears.

Boston Acoustics Home Theater Options

► SubSat Three-Piece Systems

Tiny satellites and big theater sound.

Compact Reference

Incredible sound from compact speakers.

Lynnfield VR

Audiophile sound quality with video flexibility.

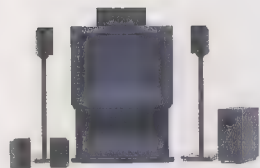
Boston/THX®

Dubbing studio quality sound.



THE \$699 SUBSAT6 II THEATER SYSTEM FILLS YOUR ROOM WITH
GREAT SOUND. YET, IT WON'T EMPTY YOUR BANK ACCOUNT.

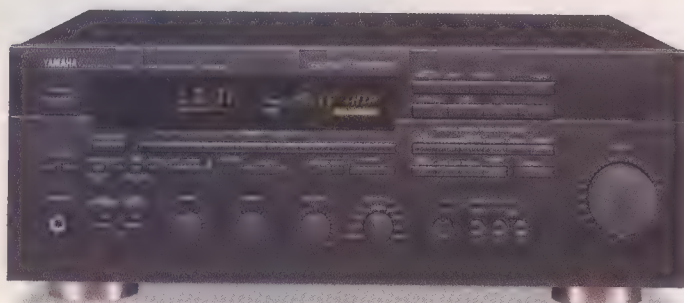
Good news. You don't have to sell Aunt Edna's priceless figurine collection to have a spectacular home theater. The SubSat6 II system, a five-time HiFi Grand Prix Award Winner, features four sculpted wide-dispersion SubSat satellites. These tiny "sats," as we affectionately call them, sit on stands, shelves or hang on your walls. Down below, the PV12 subwoofer provides exceptional lows. And in the middle is a CR1 broad-dispersion center channel speaker. This is a complete system, designed and tuned for smooth pans and true theater envelopment. Stereo Review called the SubSat6, "Superior." To learn more, lend an ear to your Boston dealer. They'll pay you back with interest.



The \$699 MSRP six-piece SubSat6 II Theater Package includes four SubSat6 II Satellites, a PV12 subwoofer and CR1 center channel speaker.

BostonAcoustics

Get a copy of our awesome music and speaker 'zine: Number 03. Write to BA, 70 Broadway, Lynnfield, MA 01940.



◀ power booster

Yamaha's RX-V890 A/V receiver (\$999) is rated to deliver 100 watts x 3 (front) plus 25 watts x 2 (rear). It has a digital Dolby Pro Logic decoder and offers 10 digital soundfield modes, including two digital enhancements of DPL. Four A/V input sets, including a front-panel set, are supplied. A subwoofer output with a low-pass filter is on hand. *Circle 121 on reader service card*

systematic ▶

Atlantic Technology's System 220 home-theater speaker package (\$1,146) is designed to kick out big sound when connected to a modest A/V receiver. The package includes a 125-watt powered subwoofer, a center speaker with timbre control, two main speakers with 4-inch woofers, and two dipole surrounds. AT recommends powering the mains, center, and surrounds with between 70 and 80 watts. *Circle 122 on reader service card*



◀ project x

Vidikron's VPF-50HD front projector (\$19,995) is designed for use with a line-quadrupler. The 50HD features a 64-kHz scanning frequency with scan-deflection circuitry capable of a 2.5-microsecond retrace time. Image size ranges from 5 to 25 feet, and a variety of aspect ratios can be accommodated. The 50HD is also equipped with a high-precision dual yoke and special luminance circuitry for constant edge-to-edge brightness. *Circle 123 on reader service card*

mr. big ▶

Sony's KP-61XBR48 61-inch rear-projector (\$5,499), part of the Videoscope line, features the new XBR chassis design, a BI-CMOS video processor, a 3-D digital comb filter, and dual-tuner PIP functions. Three color-temperature settings—including NTSC STANDARD—are supplied. The 61 has five sets of RCA and S-Video inputs and incorporates an 80-watt-rated eight-speaker audio system. *Circle 124 on reader service card*



THE BRYSTON ST SERIES AMPLIFIERS

Listen Past the Equipment
and Experience the Music
as Intended

Once in a while an idea
comes along which represents
a significant step forward in
advancing the current state-
of-the-art. We feel our new
ST Series amplifiers exemplify
this unique distinction.

A new approach to low-noise,
low distortion signal-path
has produced a line of
amplifiers which is actually
quieter and more transparent
than any source material
currently available.



Bryston ST amplifiers, from the top: 8B ST 4 channel 120 wpc, 5B ST 3 channel 120 wpc, 4B ST 250 wpc stereo, 7B ST 500 watts mono. Not shown is the 3B ST 120 wpc stereo.

The Bryston ST innovation: our ultra-linear "input buffer-with-gain" substantially lowers the distortion and inherent noise floor — *hearing is believing.*

Completely separate power supplies for each channel eliminate any crosstalk to ensure firm focus and completely accurate imaging of musical instruments.

Switchable gold plated RCA unbalanced and XLR-1/4 inch balanced inputs, with equal gain, allows flexibility for multi-channel system configurations.

20
YEAR WARRANTY
Music
for a
Generation

Bryston Ltd, P.O. Box 2170, 677 Neal Drive, Peterborough, Ontario,
Canada K9J 7Y4 Tel: (705) 742-5325 Fax: (705) 742-0882

CIRCLE NO. 48 ON READER SERVICE CARD



State of the art renamed...

Reference Standard Meitner and Museatex products
are now redesigned to be a part of Concept 2000.

CONCEPT
2000

The world reference standard for D/A converters is the
\$15,000 Meitner IDAT by Museatex. This technology is
incorporated into a new series of premium audio compo-
nents under the Concept 2000 name. Look for these
innovative products at select a/d/s/ dealers.
Available this Fall.

made
in the usa

- **MCC**

A digital preamplifier with remote control. Incorporating
analog and digital inputs, balanced line input and output,
and built-in IDAT D/A converter. The Concept 2000 MCC
will set new standards for control units in systems with
analog and digital sources.

- **BIDAT**

A multiple input D/A converter with volume control and
balanced line output for all digital sources.

- **IDAT 44+**

State of the art D/A converter.

Watch for the Concept 2000 Surround Sound Processor and
Amplifier in 1996.



a/d/s/

CONCEPT
2000



Movie News Denon LA-2300 Laserdisc Player

DIGITAL VIDEODISCS IN ONE FORM OR another may be coming, but laserdisc players remain an essential weapon in the serious movie buff's home-theater arsenal for one simple reason: It'll take years for the number of movies on DVD to approach LD's library. And, of course, LDs offer excellent picture and sound—including cutting-edge Dolby Surround AC-3, the new 5.1-channel digital surround-sound format that'll be hitting the mainstream over the next several months. Denon's sleek LA-2300 is at the vanguard of this rollout.

The LA-2300 (\$700) includes an AC-3 output jack among its roster of convenience features. Chief among them is dual-side play, a separate loading tray for music CDs (underscoring Denon's audio-buff roots), the ability to switch off the unit's display, and a shuttle ring on the supplied remote.

I really liked the 2300's dedicated CD tray. Some other players have a similar tray, but you usually have to work a little harder to use it: Most of these players ask you to press two buttons—to activate the CD tray and the open/close function—for the CD option. The 2300 makes life simpler, by offering separate open/close buttons for the LD and CD trays.

The player's front panel is just right for a no-nonsense unit. There's no jog/shuttle control, though the basic motion controls are cleverly arranged to look like one. Buttons are on hand for selecting a laserdisc side, activating MEMORY REVIEW (which returns the

laser to a spot a few seconds before the last point viewed), activating the QUICK CHANGE mode (which changes sides faster), and shutting off the display. The fluorescent-blue display shows the chapter number and elapsed time with CLV discs and frame numbers with CAV discs.

The 36-button remote is compact and functional. Its shuttle dial controls the scan mode. There's a button for activating the MEMORY REVIEW function. Two REPEAT buttons let you pick beginning and end points for a segment you want to play over and over or let you keep replaying a side or chapter. A RANDOM button jumbles the sequence of CD tracks; HILITE/INTRO shows you the first 5 seconds of each chapter on an LD, CHP/TM (chapter/time) lets you select a point on a disc numerically, and PROGRAM lets you arrange up to 24 tracks in a playback sequence of your

to an optional RF modulator, so you can connect the 2300 to a TV that doesn't have RCA-type video and audio inputs. Note that you lose roughly a quarter of your potential picture resolution (you'll get about 330 lines, horizontally) and have to live with mono audio when you use the modulator.

Picture quality via the line-level video output was excellent. Horizontal resolution measured about 420 lines. Color rendition appeared accurate with a color-bar test pattern, borders were very clean, and subtle variations in flesh tones were well distinguished. Still-frame and slow-motion quality with CAV discs was very good. Since the 2300 doesn't offer digital special effects, these effects aren't available with CLV discs. At the fast-scan speeds, CAV pictures looked great, but CLV discs were jittery, with an annoying black band (representing the vertical blanking interval) in the middle of the frame. The CLEAR SCAN function, which is activated by pressing DISPLAY and then SCAN, solves this problem, though the image is interrupted by black frames. With CAV discs, multi-speed playback options are 1/30X, 1/8X, 1/2X, and 2X. The side-change process takes about 10 seconds.

Audio quality was similarly excellent. Discs encoded with Dolby Surround sounded terrific, as did music CDs when spun in the dedicated CD tray. And AC-3 is a real eye-opener: Everything sounds more clear and alive, and the dedicated subwoofer channel rocks the house when you use a good, amply powered subwoofer. Though only a few discs currently include AC-3 encoding, it'll soon become the norm—on major releases, at

Denon LA-2300										
	1	2	3	4	5	6	7	8	9	10
COSMETICS										•
EASE OF USE										•
PERFORMANCE										•
VALUE										•
CIRCLE 125 ON READER SERVICE CARD										

own device. The remote's DISPLAY button brings up the on-screen display.

Connections include the AC-3 output, two sets of regular stereo audio outputs, two line-level video outputs, and a single S-Video output. There's also a set of video, monaural audio, and "plug-in-power" jacks for hookup

least. For that eventuality, the 2300 has you covered.

In sum, Denon's LA-2300 is a superior movie-playback package. It has the basic features you need to stay on the couch and enjoy movies with unimpeachable picture and sound quality. Thanks to its overall quality, and its AC-3 output, you should be able to stay on that couch for years to come.

—Cliff Roth

Get the Picture

Panasonic PV-S4566 S-VHS VCR

MOST S-VHS VCRs ARE LOADED with editing features, since these decks are often used in conjunction with camcorders to craft finished programs. Panasonic's PV-S4566 bucks the trend. Rather than weighing in as a heavyweight editor, it's designed to serve as a high-quality home-theater source and recorder. So you won't find the flying erase heads, jog/shuttle dial, and edit-control capability you're used to seeing on an S-VHS deck. Instead, the S4566 (\$549) seeks to deliver useful convenience features plus topnotch image and sound quality.

Convenience is emphasized through the front panel's inclusion of a fairly complete set of controls. They let you engage the record or play mode, select the VCR or a connected TV as the source, initiate fast-forward or rewind, change channels, and even handle part of the first-time setup. The front-panel shuttle ring lets you search through tapes at either fast or slow speed. Front and rear A/V input jacks simplify the process of making connections as well as dubbing. The rear set includes A/V outputs, including an S-Video in and out. Audio features include a Hi-Fi mode, an MTS tuner, and SAP.

The remote controls the VCR as well as most major brands of televisions and cable boxes. Its design is much improved over many other remotes: Though it has lots of very small buttons (usually a recipe for disaster), it fits comfortably in the hand, and everything's placed logically according to function. A nice touch is that the RECORD button is small, recessed, and positioned off to one side, minimizing the chances that you'll engage this function accidentally.

One thing you'll only find on the remote is a control for manually adjusting the deck's tracking system. If you misplace the remote, you'll have to rely totally on the deck's automatic tracking system. Fortunately, the S4566 does a good job here.

Getting this deck up and running is easy, thanks to an initial setup function that activates the first time you hook up the VCR and turn it on. On-screen menus prompt you to make setup choices (channel memorization and clock setting, for example); the remote's channel selector/manual-tracking buttons let you do the navigating.

Note that the auto channel-select feature won't work if the S4566 accepts an input from an addressable cable box and passes this output to a TV set. And, though it offers the VCR Plus+ programming system, the S4566 doesn't offer cable-box control. Panasonic should remedy this on a next-generation incarnation.

Performance features include Panasonic's automatic picture-quality system. Referred to in the S4566's owner's manual as DynAmorphous Metal Head/Color Noise Reduction/Advanced Noise Reduction, this triple-threat package is a serious performer. Technical editor Lance Braithwaite measured 400 lines of horizontal resolution in S-VHS mode, 240 lines in VHS mode. Picture S/N didn't vary much as we switched from SP to SLP; all figures fell between 44.1 and 49.7 dB. Audio quality was good in both the Hi-Fi and linear mono modes; Hi-Fi frequency response was a bit ragged at the high end, running only 20 to 15,000 Hz with a reasonable +0.1, -3-dB deviation.

The front-panel shuttle ring offers forward-search speeds ranging from about one frame per second to full fast-forward; reverse search can only be performed at normal speed or faster (a common limitation of consumer-level VCRs that are equipped with shuttle rings). The remote offers a SLOW SEARCH but-

ton, with the option to search frame by frame, as well as standard forward and reverse scan buttons. Though the useful SLOW SEARCH function isn't quite as flexible as the shuttle ring, it doesn't

Panasonic PV-S4566									
1 2 3 4 5 6 7 8 9 10									
COSMETICS									
EASE OF USE									
PERFORMANCE									
VALUE									
CIRCLE 126 ON READER SERVICE CARD									

weigh the remote down like a ring would.

While I really missed the cable-box control aspect of VCR Plus+, Panasonic's PV-S4566 delivers S-VHS-caliber picture quality and very good sonics at a very reasonable price. If your system includes high-quality sources, the S4566 is ready to record off of them with 400 lines of horizontal resolution.

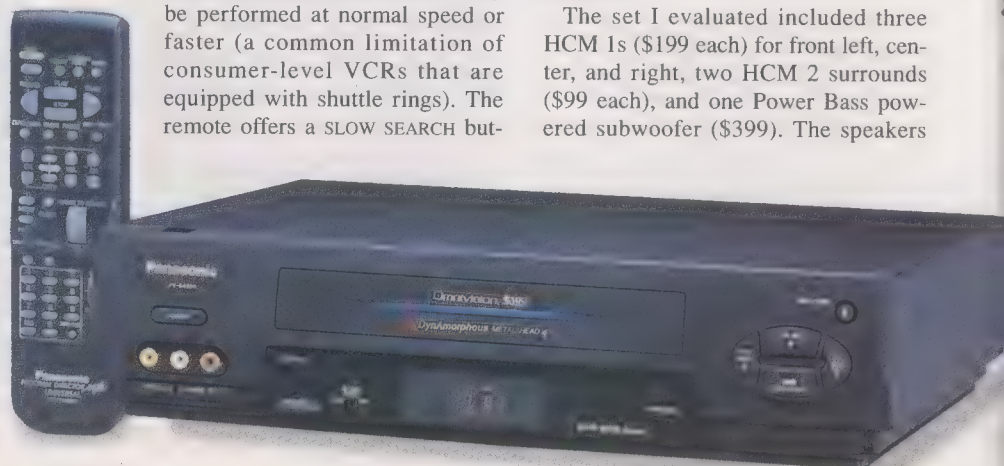
—Timothy Liebe

Rockapella

Rock Solid HCM Home-Theater Speaker Set

FEW PEOPLE CAN RESIST THE EXPERIENCE provided by a good home-theater system, but many positively curdle at the thought of setting up five or six speakers in their living room. In response, several speaker manufacturers—Celestion, Jamo, JBL, and Polk come to mind—have developed small, extremely stylish speaker sets that don't compromise on performance. Rock Solid, a corporate sibling of B&W, has helped blaze this particular trail.

The set I evaluated included three HCM 1s (\$199 each) for front left, center, and right, two HCM 2 surrounds (\$99 each), and one Power Bass powered subwoofer (\$399). The speakers



MARANTZ HOME THEATER PURE AND SIMPLE



A Home THX® Audio System allows you to hear film sound in your home as it was designed to be heard, providing wide dynamic range, precise acoustic imaging, crystal clear dialog, properly balanced full frequency range, and a spacious enveloping surround sound field. Marantz components faithfully adhere to these precepts, as they are precisely the goals set by our engineers.

Our new AV-600 Pre-amplifier/Tuner combines a superb Home THX Cinema and Dolby Pro•Logic decoder together with a full function A/V system pre-amplifier and AM/FM stereo tuner, all in one unit that is surprisingly affordable. An ideal complement to the AV-600 is the Marantz MA-500 THX-certified monoblock power amplifier, which combines prodigious power,



exceptional clarity, and incredible flexibility—able to drive virtually any speaker system, regardless of impedance or efficiency. Simply choose the appropriate number of amp channels to exactly match your system power needs.

Add your choice of Marantz source components, such as our auto-reverse laser disc combi player and deluxe VHS Hi-Fi VCR, and you've put together an exceptional music and cinema sound system. Audition these superb components at your Marantz dealer soon.



marantz
PURE HIGH FIDELITY

Marantz America, Inc.
440 Medinah Road, Roselle, IL 60172-2330
Tel: 708-307-3100 • 708-307-2687 Fax

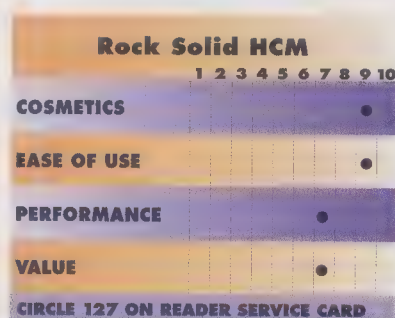
THX is a registered trademark of Lucasfilm Ltd. Dolby and Pro•Logic are trademarks of Dolby Laboratories Licensing Corporation.



are small, they look terrific, and the HCM 1s offer ingenious mounting provisions that let you aim them for optimum performance.

The HCM 1 and HCM 2 have tough plastic cabinets that look just great—both high-tech and sleek. Besides looking great, their sculpted faces undoubtedly contribute to their radiation patterns, which, as you'll see, proved effective. The two-way HCM 1 uses a 5-inch bass-reflex woofer and a 1-inch dome tweeter; it weighs 6.6 pounds and stands 9.25 x 6.5 x 6.5 inches (h/w/d). The HCM 2 uses a 4-inch bass-reflex woofer and a 1-inch dome tweeter; it weighs only 3.5 pounds and stands 8 x 5.5 x 5.5 inches (h/w/d).

The HCM 1 has an extremely clever mounting stand that lets you direct the speaker's main output on any horizontal or vertical axis. The stand's ball-joint requires no assembly, and an



Allen wrench is supplied for aiming the speaker. The HCM 2 has a fixed wall-mount bracket.

Specifications for the HCM 1 include a frequency response of 70 to 20,000 Hz ± 3 dB, power handling of 150 watts, sensitivity of 89 dB SPL, and nominal impedance of 8 ohms. The

HCM 2 has a frequency response of 80 to 20,000 Hz ± 3 dB, power handling of 75 watts, sensitivity of 87 dB SPL, and a nominal impedance of 8 ohms. Both units employ solid-state protection for the tweeter and have metal grilles; they're available in black or white.

The Power Bass subwoofer stands at a mere 14.4 x 13 x 13.5 inches (h/w/d) and weighs 22 pounds. It employs an 8-inch fiber-cone woofer, a ported 0.95-cubic-foot cabinet, and a 70-watt-rated amplifier to cover the range between 38 and 95 Hz. An active crossover with a fixed cutoff at 95 Hz and a slope of 12 dB per octave sets the upper limit of the subwoofer; a passive high-pass filter with a slope of 6 dB per octave can be used with the speaker-level inputs and outputs to filter satellites at 95 Hz. Line-level inputs and outputs are supplied for direct RCA-cable hookup. The sub's volume control is conveniently located on the front panel and can be locked to keep it from being accidentally nudged to another setting; the rear panel offers a phase control.

All of the speakers are magnetically shielded. The system is covered by a 5-year limited warranty.

Installation is simple thanks to the mounting provisions and the sub's relatively small dimensions. The HCM 1 is especially flexible, and it can be used either vertically or horizontally in a center-channel role. Measurements revealed extremely good frequency response from the HCM 1, even when I oriented it horizontally. Lows generally dropped off around 125 Hz and rose smoothly to 20,000 Hz ± 4 dB; the tweeter output peaked at 12,500 Hz, where it was about 4 dB above the main output. When used horizontally,

the response pattern was nearly identical and held up admirably, even 45 degrees off-axis in all directions.

The HCM 2 ran from about 150 to 20,000 Hz ± 5 dB; jagged response between 3,000 and 8,000 Hz accounted for most of that ± 5 -dB deviation. When placed directly against a wall (as it might be in a surround role), the HCM 2 reached down to 75 Hz and the treble roughness flattened—though the range between 100 and 2,000 Hz became choppy.

Both satellites have removable cloth inserts that shield the drivers from view. Rock Solid recommends removing the scrims to improve sonic clarity, but I found that they flattened response above 3,000 Hz, so I left them in place.

When positioned in a corner, the tiny Power Bass subwoofer kicked out an amazing 32 Hz in my living room, with good smooth output up to around 150 Hz. Working as a team, the system kicked out 101 dB SPL with my reference SPL disc, and overall bass punch and authority were pretty darn good.

Overall, the system had an airy and clean sound, though its 101-dB output didn't quite fill my 22 x 12-foot room. For the price, however, the set put out a lot of high-quality sound. A CD of organ music was also surprisingly satisfying, with good extension and heft. Front imaging was good, if not great. Surround spaciousness and ambience were very good.

You literally have hundreds of options when putting together a surround-sound speaker system. Rock Solid's system is unusually seductive: It looks gorgeous, its parts are small, your setup flexibility is enormous, and it sounds very good, with admirable clarity and surprising low-end extension. You'll be hard-pressed to find a system that's easier to live with. —Tom Noursaine

Code Red Onkyo A-SV620 A/V Integrated Amp

AUDIO/VIDEO INTEGRATED AMPLIFIERS don't make a lot of headlines, but the receiver-minus-one concept can be uncommonly useful. You can use one to upgrade a two-channel stereo receiver for home-theater use, letting the A/V amp provide surround-sound power and processing while the receiver tunes radio stations. Or you can opt for one if you want to assemble a pure movie- and TV-dedi-



Our 1452-sq. ft. Diamond Vision® Stadium Screen.

My, how they've grown.

Our Diamond Vision Stadium Screen, seen exclusively at 26 of the nation's top stadiums, is among the largest television images ever created (over 50 million sports fans a year watch one, so it helps to be big).

Like its big brother, our 40-inch tube TV is the only one of its kind, and the largest tube TV you can buy, made exclusively by Mitsubishi. With a screen size of 768 square inches—a full 31% bigger than a 35-inch and an overwhelming 120% bigger than a 27-inch—it brings the action from the stadium right into your living room.

Separated at birth?



Our home version, the world's only 40-inch tube TV.

But size is just part of the story. Our 40-inch television also has a brighter picture, higher contrast, and a longer life than just about anything else out there.

To own a Diamond Vision Screen, you'd have to buy your own stadium. But for considerably less, you can experience Diamond Vision excitement on the world's only 40-inch tube TV.

The only place you can buy our remarkable 40-inch TV is at an authorized Mitsubishi dealer. For the location of one in your area, please call 1-800-937-0000, Ext. 868.



mitsubishi
THE BIG SCREEN COMPANY™

cated home-theater system, where radio listening will never be required. The A-SV620 is Onkyo's newest A/V integrated amp, and the first to employ the Motorola digital surround-sound decoder Onkyo is using in its new line of A/V components.

The A-SV620 (\$650) is rated to deliver moderate power by current standards—75 watts to each of three front speakers plus 25 watts to each surround speaker (both at 1,000 Hz); use it in its two-channel mode and it'll kick out 120 watts per. In addition to digital Dolby Pro Logic decoding, the 620 offers four additional DSP-based surround-sound modes.

One very clever feature: Intelligent Power Management. IPM automatically powers up the amplifiers and switches to its VIDEO 1 input when a video signal is present there. At the same time, it blocks pass-through video. So if you connect your TV's video output to VIDEO 1, the Onkyo will power up automatically and deliver surround-sound audio whenever you turn on your TV.

Connections include a good array of audio/video jacks for command and control of a fully equipped home-theater installation. There are three A/V sets (two with full input/output capability for recording VCRs), two audio tape loops, and a phonograph input. There's a line-level subwoofer output. And speaker hookups use heavy five-way binding posts for main left/right, though the center and surround channels use fairly flimsy clip-terminals.

The 620 omits S-Video inputs, and there aren't any A/V inputs on the front panel. The unit also lacks individual preamp-level outputs, which prevents you from upgrading the 620's power via onboard power amplifiers. In addition, the subwoofer output is unfiltered.

Multiroom provisions are on tap: You can use the surround-channel amps to

drive a pair of speakers in another room (or outdoors), and you can control volume and source selection from that secondary listening area, even if the 620 is being used in the primary room. Inputs and outputs for the optional infrared transmitters and receivers that route your volume and source commands are provided. You can't use the 620 in surround mode (or certain of its tape-dubbing connections) when the multiroom mode is active, though.

A built-in pink-noise generator lets you calibrate the amplifiers for proper surround-sound output. During setup, the noise cycles very quickly and doesn't "hold" when you're adjusting a particular channel, making the process more difficult than it needs to be. But the 620 yielded outstanding master-volume tracking accuracy over an ample range—in other words, the channels stayed balanced after I'd balanced them, no matter where I set the volume control.

The 620's controls are reasonably easy to use, but its front-panel graphics are impossible to read under anything less than operating-room lighting (unfortunately, this is the norm with many A/V components). The front-panel display is similarly hard to decipher—and this matters, because the 620 doesn't generate on-screen displays for your TV set. The supplied remote is generally uninspired: All of the keys are identically sized and shaped, and its layout doesn't help you find what you want in the dark.

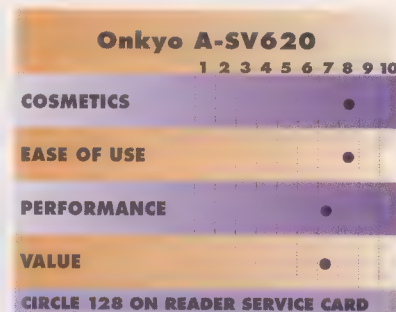
In terms of sound quality, the 620 was solid. Front-channel power was generous and dynamic, and in stereo mode (always a good indicator of basic amplifier quality) the 620 sounded quite good: punchy and tight, with ample, rich bottom-end impact and extension and fine midrange detail.

The 620's surround-channel amps

turned in only average performance. They were certainly adequate with most movies and music, even when I had the volume control turned up quite high. But when stressed by widely dynamic music such as a highly ambient solo piano recording, or by hyperactive surround mixes such as that in *Star-gate*, they stumbled audibly. Using highly sensitive surround speakers (90 dB or higher) would help a lot here.

As is often the case, the "bonus" DSP surround modes were a mixed bag. THEATER increases the spread of the surround-channel output, and it was unusually subtle. HALL was also useful, with less reverb than usual. Unfortunately, the only adjustable parameter is surround-channel delay time, and you can only store one group of channel levels; do this in the Pro Logic mode (which you'll probably use most often) and the channels in the other modes (save THEATER) will be too high. This is typical in mid-priced A/V receivers and integrated amps, unfortunately, and it limits the usefulness of these modes.

Dolby Pro Logic performance was



generally very solid. Motorola's processing chip provided truly remarkable center- and front-channel separation. Leakage was virtually nonexistent, and what leakage existed was quite low in level and subject to only a bit of sibilance. Pro Logic steering was accurate and reasonably smooth.

For most real-world situations, Onkyo's A-SV620 will do a fine job. It covers all of the important performance bases and adds a couple of nifty features, including the multiroom function. Its real strengths are solid, musical front-trio power and very fine Pro Logic decoding. If you're looking for a radio-free home-theater controller, the 620 can put you in the driver's seat.

—Daniel Kumin



They're not listening to KEF Home Theatre.



Where conventional home theatre audio systems tie you down to one small 'sweet spot', KEF sets you free. Everyone enjoys the same remarkable sound quality, wherever they sit.

Originally developed for our world famous hi-fi loudspeakers, KEF's revolutionary Uni-Q® technology creates a detailed audio image over a far wider area than conventional speakers. With identical drivers on all five channels, the same high quality sound is heard throughout the room enhancing the action on screen by involving each viewer in an uncannily realistic 3-dimensional sound stage.

They look superb, too. The stylish compact cabinets blend discreetly with your furnishings - and as you'd expect from the manufacturers of some of the world's finest loudspeakers, the system is compatible with virtually all quality receivers and hi-fi systems.

If you want *everyone* in the room to enjoy the Home Theatre experience, our compact new six-piece system is the way to go. Why tie yourself down when freedom comes at such an affordable price?



The experience
of sound

MODELS SHOWN ARE THE 80C CENTRE CHANNEL SPEAKER, 60S FRONT/SURROUND SPEAKERS AND 30B POWERED SUBWOOFER. KEF AND UNI-Q ARE REGISTERED TRADEMARKS. UNI-Q IS PROTECTED UNDER GB PATENT 2 236929. WORLDWIDE PATENTS PENDING.

**FOR DETAILS ON KEF HOME THEATRE PLEASE WRITE TO: KEF ELECTRONICS OF AMERICA, INC,
89 DOUG BROWN WAY, HOLLISTON, MA. 01746 USA. TEL: 508 429 3600.**





DV NATION

The Digital Video Format Debuts With Camcorders From Panasonic and Sony

AS THE MOST TECHNICALLY COMPLEX OF THE POPULAR media, video has been the final frontier for digital technology. Print went digital in the '70s, and audio took its turn in the '80s. Now video is taking the plunge, and the brand-new Digital Video (DV) format is leading the way. Three DV camcorders—Panasonic's PV-DV1000 (price not available at presstime) and Sony's DCR-VX1000 (\$4,199) and DCR-VX700 (\$2,999)—should be in stores now; only Hollywood's concern over copyright issues has prevented DV-format VCRs from accompanying them.

DV isn't the first digital video format to come our way, of course. Crude digital video that struggles to reach VHS heights has been a part of the multimedia-computer universe for several years, and digital satellite-TV systems have been available since mid-1994. Nor will DV be the last digital video format we'll see, as digital videodiscs, D-VHS bit-stream recorders, and HDTV are expected to hit soon. But DV is here now, and it isn't hype: The format represents a true breakthrough in recording and playback quality. Exactly 55 companies—including Hitachi, JVC, and Thomson (parent company of RCA)—have signed on the format's dotted line.

DV offers three primary benefits: superb picture resolution (the format spec is 500 lines of horizontal resolution), excellent color fidelity, and the ability to make perfect digital copies. It's important to note, however, that DV is a do-it-yourself format: DV programming will exist only if you make it, either with a DV camcorder or a DVCR. In other words, none of the Hollywood studios are talking about shipping movies on DV cassettes to your local video rental shop.

Home-brewed DV tapes should be awesome performers, though. That 500-line figure is about 20 percent better than the horizontal resolution of even the best laserdisc players and S-VHS VCRs. Color accuracy doesn't appear to represent a compromise, either. And the ability to make perfect digital dubs is the holy grail of home video.

For starters, a DVCR will theoretically allow you to tape broadcast, ca-

blecast, and satellite TV programs with no loss in image quality. Similarly, videographers who like to edit their tapes should be able to dub with no loss in quality, banishing the problem of generation loss. You'll need either two DV camcorders or a DV cam and a DVCR to make digital copies, of course, and it's unclear how many digital copies we'll be allowed to make in the wake of whatever copyright agreement the electronics manufacturers squeeze out of Hollywood.

At this point, the movie moguls are taking a hard line; the thought of our using DVCRs to make perfect dubs gives them fits. Whether they ask the electronics companies for a fee every time a DVCR is manufactured or charge us every time we view a digital recording of a pay-per-view movie—or any other program they've copyrighted—remains to be seen.

DV Us

Camcorders are at the head of DV's charge into the home. They aren't radical departures in terms of looks—though the three semi-pro models introduced this fall are slightly larger than the smallest 8mm and VHS-C cams. From the lens to the image sensor, a DV cam is essentially identical to its analog forebear. After the image sensor, however, the digital processing and recording circuitry kicks in, and it becomes a whole new ballgame.

The RGB information from the image sensor(s) is first converted into "YUV" information—the Y stands for luminance (black-and-white), U for luminance-minus-red, v for luminance-minus-blue. Working with these three signals separately is more efficient and effective, since luminance needs special attention (generally accepted research shows that the human eye is far more sensitive to black-and-white information than it is to color detail). Like other digital-video systems, DV provides a very detailed luminance signal and a comparatively coarse color signal.

It accomplishes this by using different sampling rates for the three components. Officially, DV has a sampling rate of 4:1:1. This means that the luminance signal gets sampled at approximately four times the 3.58-MHz color sub-carrier frequency (the exact rate is 13.5 million samples per second). The two chroma-derived signals—U and v—are sampled at one-fourth this rate.

Broadcast-TV engineers will point out, correctly, that DV's official sampling rate is numerically inferior to the 4:2:2 sampling schemes employed by the various pro digital-video formats (D-1, D-2, D-5, Digital Betacam, and others), but the visible difference is negligible, and DV is capable of capturing all of the color detail that broadcast signals can throw at it (and more).

In the sampling process, Y, U, and v—each of which is basically a voltage representing the relative brightness or color value at that point in the signal—are converted into 8-bit digital words by three A/D (analog-to-digital) converters; the process is similar to the way digital

ON THE INSIDE



audio is recorded. Eight bits of binary information produce 256 different color-value levels—but we have three 8-bit words (one each for Y, U, and V), so there are 16.7 million different color possibilities (the relationship is logarithmic). The 8-bit sample size is the same as that used in the pro formats (with the exception of D-5, which has a 10-bit luminance sample size), so DV rivals these formats in terms of S/N—which is to say that it's superb. The format's spec, 54 dB, is 6 dB or so better than the S/N you get with even the best Hi8 and Super-VHS gear.

Next, the top and bottom of the digitized picture (the unseen scan lines) are lopped off, and the information that remains moves on to a chip that performs Discrete Cosine Transform (DCT) data reduction, the same method that's used with JPEG still photography. Like any digital-video format, DV wouldn't be possible without data reduction.

DCT is fundamentally different from the MPEG reduction used in DSS (and in DVD development), however, since each DCT-coded frame contains complete data for that frame; the only data that gets eliminated is that which is repeated from frame to frame. With MPEG, data that's repeated *within* a frame can also be eliminated. This makes MPEG more efficient than DCT (MPEG's data stream flows from 1 to 4 Mbps, DCT's at 5.4 Mbps), but it would be cumbersome for video editing, since MPEG frame information is spread out over 15 consecutive frames—and that just wouldn't do in a format where editing is half the game.

The DCT coder sucks in a frame's worth of video information at a time—that's 450,000 samples of data, or roughly 5.4 Mb of information. This data is compressed by a 5:1 ratio. Bits allocated solely for error correction are added to catch tape dropouts or other errors, and the whole shebang gets recorded onto special DV tape as a complete frame.

TAPE TALK

Unlike traditional analog videotape, which uses a single helical track to record each field of video (recall that two interlaced fields equal one frame), DV uses 10 helical tracks to record each frame. Its two helical heads spin at 150 revolutions per second (that's 9,000 rpm), which allows 300 tracks per second (30 fps x 10 tracks per frame) to be recorded, with each track representing

180 degrees of rotation around the head drum. (With DV cams built to the European PAL standard, 12 helical tracks are used to record each frame at 25 fps.)

Compare DV's 9,000 rpm to 8mm and VHS's 1,800 rpm. DV heads are smaller than 8mm and VHS heads, too—DV's measure just 21.7 mm in diameter, while 8mm has 40-mm head drums and full-size VHS has 62-mm drums. The width of each DV helical track is just 10 μ m; VHS track-width is 58 μ m at SP, and 8mm track-width is 20.5 μ m.

Each DV track is split into four sections. Video information is recorded on one of the interior sections. The other interior section is used for recording audio information. The other two sections, which occupy the spaces at the very top and bottom of the track, are used for subcode information and provide a tracking signal, time-code data, an index ID, and still-picture ID codes. In sum, each helical track—whose width is roughly one-tenth the width of a human hair—contains 2.5 million bits of data.

The tape is 6.35 mm wide—that translates to 0.25 inches, the same width used by old open-reel decks and the decidedly low-fi 8-track format. Though its width may be old-fashioned, DV tape technology is certainly the most advanced ever. The tape's magnetic surface is made from double layers of evaporated metal particles; an overcoat of hard carbon minimizes tape wear. This extra protection is needed because of the speed with which the head drum spins.

The amount of data that can be recorded on DV tape is astonishing—as mentioned, the bit rate is 25 Mbps. Still, that's not nearly enough "space" to record a raw digital-video signal, which requires about 160 Mbps for a broadcast-quality TV signal. Enter DCT.



HANDY: Panasonic's Japan-market DVC-1000 will be our PV-DV1000.

DV tape is initially being packaged in two cassette sizes: A mini version intended for camcorder use is less than half the size of an 8mm cassette; it measures about 2.6 x 1.85 x 0.48 inches (h/w/d) and provides up to 60 minutes of recording. The standard-size cassette that'll accompany DVCRs is about three times larger than the mini, or one-fourth the size of a VHS cassette—it measures about 4.9 x 3 x 0.6 inches (h/w/d) and will allow up to 4.5 hours of recording. Thinner tapes currently being developed may offer even longer recording times.

Instead of motion video, DV cams can record up to 580 high-quality still frames on a 60-minute mini cassette. During playback, each still frame, which can be accompanied by audio, lasts for about 6 seconds.

Sony points out that their DV cassettes are unique, since they're endowed with a proprietary 4-kb memory chip that records exposure information and subcode data for initializing a tape every time you slide it into a DV component. The company's 60-minute mini cassette has a suggested list price of \$25. (Ouch!)

DV cassettes will no doubt be used in computer applications. The mini cassette's total capacity is 11 GB, and full-size DV cassettes will hold a whopping 50 GB.

JUST EDIT

Besides its raw copying capability, DV has a bunch of impressive editing features up its sleeve. Audio can be configured two ways—as a single pair of CD-quality stereo tracks (16 bits per channel with a 44.1-kHz sampling rate) or as two sets of slightly lower fidelity stereo tracks (12 bits per channel with a 32-kHz

sampling rate). The first camcorders use the four-track mode, which lets you record in stereo while you shoot. When DVCRs are available, you'll be able to dub in additional stereo tracks if you want—very useful for adding synchronized music, narration, and so on. DVCRs will offer also video-insert editing, so you can lay down the music first and then edit in matching images.

All DV components will include a new five-pin mini-connector, allowing you to copy video and audio signals from one DV component to another in the digital domain. This connector actually replaces six analog-cable connectors, since it simultaneously carries both input and output signals for video and stereo audio. In the future, the five-pin connector will also carry edit-control information, so there won't be a need for separate edit-controller jacks. Sony's DV camcorders feature the familiar CONTROL-L (LANC) remote-editing control jack. Through it, DV time-code information can be communicated to many current edit controllers.

The DV camcorders also have standard analog line-level video and audio outputs, so you can connect them to any

TV or dub your homemade videos onto ordinary VHS cassettes.

MODEL CITIZENS

The first DV cams are mature and sophisticated components. Panasonic's PV-DV1000 is a prosumer-type camcorder that features three CCD image sensors; each image-sensor chip has 270,000 pixels. The 10:1 variable-speed power-zoom lens is expandable to 20:1 with the digital-zoom feature. The zoom goes at four speeds, and the Turbo Zoom feature completes a sweep in just 2 seconds. Digital electronic image stabilization is also onboard.

The DV1000 has a large, 180,000-pixel color viewfinder; the image it produces can be seen from several inches away. Digital picture effects include a 16:9 widescreen-expansion mode, the digital zoom, and Digital Photo Shot (the still-picture function that's written into the DV format). A full complement of manual-focus, iris, white-balance, and shutter-speed override controls are on tap.

Lance Braithwaite, VIDEO's technical editor, and I spent some time with Sony's DV camcorders, and I must say that their picture quality was superb. We

saw none of the motion artifacts that creep into MPEG-encoded satellite-TV pictures, and picture detail was simply stunning. Still-frame quality and overall image stability were absolutely superb. [For a full "VIDEO Test" of the Sony DCR-VX1000, see page 84.]

A DV paper provided by Sony promises that DV will accommodate high-definition (HD) signals whenever they become available, apparently by doubling the tape speed. With this mode, the higher capacity mini cassette will record for up to 30 minutes and the data rate will double to 50 Mbps.

THOUGH LEGAL HASSLES ARE KEEPING DVCRs out of living rooms for the present, the introduction of DV camcorders is a turning point in the evolution of media technology. Before DV, low-budget film and video producers have continually been assailed with one tired refrain: Consumer video formats aren't broadcast-quality. DV should put an end to this debate. And tech-savvy videographers eager for the next big thing are sure to snap it up. I certainly wouldn't blame them: DV truly is an empowering technology.

—Cliff Roth



YOU NEVER KNOW WHEN YOU'LL NEED A FULLY CHARGED CAMCORDER BATTERY.



Life's full of surprises. What shouldn't be a surprise is a dead battery just when you want to record that once-in-a-lifetime shot. 🐟 That's why we created the Lenmar RediCell™, the only camcorder battery designed to keep on charging until you need it. Since it's a NoMEM® battery, it won't build up a memory like nickel-cadmiums, so it can remain charging day after day and always deliver 100% at a moment's notice. 🐟 Sort of like your adrenaline. 🐟 Ask your Lenmar dealer for the new RediCell Battery. 🐟 So you can be ready for whatever memorable event sneaks up on you next.

LENMAR
PERFORMANCE PRODUCTS

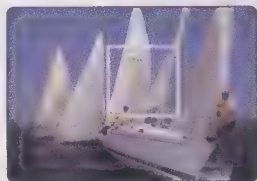
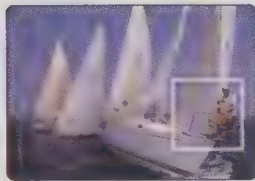
For the name of your nearest Lenmar dealer, and a catalog of our other Camcorder Performance Products call: 800/424-2703 ©1995 Lenmar Enterprises, Inc.
CIRCLE NO. 59 ON READER SERVICE CARD



First it catches your eye, then it tracks it. It's the sleek new Canon ES5000. The only camcorder that offers an auto-focus system and special functions that are solely controlled by the movement of your eye.

To operate the ES5000's Eye Controlled Focus, simply look through the viewfinder, direct your eye to any subject within the frame, and the camcorder automatically focuses there. Redirect your eye somewhere else within the frame and instantly the camcorder refocuses at the new position. Never before has autofocusing been smoother or simpler. With the ES5000 what you see is literally what you shoot.

Introducing the ES5000 with the world's first Eye Control System.



Canon's new Eye Controlled Focus is operated by the movement of your eye.

Other ES5000 functions can be activated through our exclusive Eye Control technology as well. You can start and stop recording, display dates and titles, fade, operate digital effects and more, all with just a glance.

But there's more to the ES5000 than just what meets the eye. Consider its many other sophisticated features. Like a powerful 20x Optical/40x Digital Zoom, Canon's renowned Optical Image Stabilization system, a Super-High Resolution 180,000-pixel Color Viewfinder, and a high-quality Hi8 format for truly professional results. Add to all that its sleek, ergonomic metallic design and you begin to see why the super-compact ES5000 is the biggest news in camcorders today.

For more information on the ES5000, simply call us at 1-800-OK-CANON. We're sure you'll find it to be an eye-opening experience.

Canon

eye spy ▶

Canon's ES5000 Hi8 camcorder (\$2,300) bounces a harmless infrared beam off of the videographer's eye to determine focus and exposure; digital effects, start/stop, and other features can be selected simply by looking at viewfinder graphics. Zoom options are 20X optical and 40X digital; optical image stabilization, 11 digital effects, and five preprogrammed auto-exposure modes are on tap. *Circle 129 on reader service card*

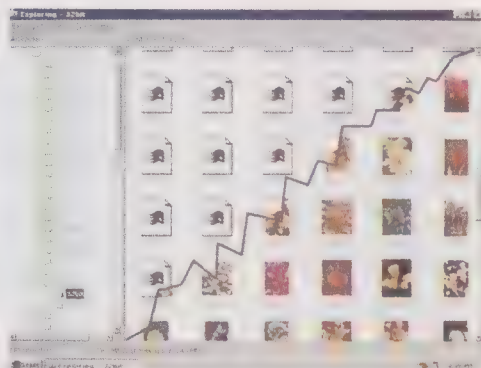


◀ three-point conversion

AVer Media's AVerKey3 lets you transfer video and graphics from a computer-controlled edit station to home video. Available in PC-only (\$399) and PC/Macintosh Universal (\$499) versions, the AVerKey3 converts VGA signals with resolutions of up to 800 x 600 pixels to NTSC or PAL without software drivers. Features include a six-line buffer, screen freeze, zoom, and pan. A remote control is supplied. *Circle 130 on reader service card*

pak it in ▶

Inset Systems' Hijaak 95 Graphics Energizer Pak upgrade (\$99) simplifies graphics manipulation for PC-based videographers who have Windows 95 and the original Hijaak. Add the Pak and you can view, organize, convert, import, trace, and print images without opening the Hijaak application window. *Circle 131 on reader service card*



◀ waterproof world

Hitachi's VM-H100LA camcorder (\$2,500) opens up new options thanks to its detachable waterproof lens. Said to be waterproof down to a depth of 15 feet, the cam's lens comes with a 6-foot-long cable and a 15-foot extension cable. Optional accessories include a boom-type extension pole and even longer extension cables. The camera features a 4-inch LCD, Hi-Fi audio, 12X optical and 24X digital zoom, and electronic image stabilization. *Circle 132 on reader service card*

No matter where you are, you're there.

Musical truth.

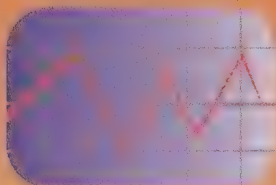
It begins deep in the belly of the passage. Thunderous bass, so powerful you're helpless as you're slowly taken prisoner by the music. The subwoofers catapult you to the furthest reaches of the soundstage. You gain a new focus. Your world narrows down as your horizons grow.

See your Energy dealer today. And audition the new EPS-series Subwoofers. Clean, deep undistorted bass. Personal. Provocative. All about you.



Energy EPS-series subwoofers

ENERGY
EXPERIMENTATION
Sound as a performance art.



VIDEO TEST



Big Shot

**Sony's DCR-VX1000
takes the shot
heard 'round the world**

**TEST
817**

WE'RE MOVING INEXORABLY TOWARD A DIGITAL WORLD, a world in which we will think in "bits" rather than in intervals of time. So says Nicholas Negroponte, the MIT scholar who's replaced Marshall McLuhan as the world's foremost technology/media guru, in his recent book, *Being Digital*. Sony's brilliant DCR-VX1000 proves Negroponte's point, as it boldly takes camcorders into that new world. For the first time, digital video recording technology is being offered on a

consumer camcorder—and the results are superb.

The DCR-VX1000 (\$4,199) adheres to the new Digital Video (DV) format. DV is identical to any other camcorder format from the lens to the image sensor, but the similarities end there. We detail the inner workings of DV elsewhere [see "DV Nation," page 78], but, in a nutshell, it works like this: Image information captured by the sensor(s) is split into three signal components—one luminance, two color. Each signal is sampled by its own analog-to-digital converter (with the luminance signal receiving more "attention"), and this data is reduced using the Discrete

Cosine Transform (DCT) process. Finally, the reduced data is recorded by special video heads on special DV videotape.

Thanks to DV technology, the VX1000 promises—and delivers—several serious benefits. The images captured by its three 410,000-pixel CCD image sensors, and reduced by DCT, are clearly the best I've seen on a consumer camcorder; they're probably better than what you get with some professional equipment. The VX1000's digital nature theoretically makes it a flawless source in a complete DV editing chain. Digital still images can be taken. And sophisticated error-correction algorithms

compensate for the dropouts and other annoyances you commonly get with a tape-based format.

The VX1000 isn't just a showboat for new technology, though. It offers everything that a seriously high-end camcorder should; useful and well implemented features abound. There's an optical image-stabilization system that improves on Sony's previous best, a 20X zoom (10X optical with 2X digital doubling), a precision 400-line color viewfinder, 12-bit PCM stereo audio recording, custom presets, improved battery charging, ■ neutral-density filter that helps prevent picture washout when shooting outdoors on bright days, and much, much more. Great flexibility is on hand thanks to its low-light sensitivity and auto functions.

Though the VX1000 stands squarely on the shoulders of Sony's CCD-VX3 ["VIDEO Test," March 1993], it truly goes where no camcorder has gone before. The three CCDs that debuted in the CCD-VX3 3 years ago are just the beginning. The three-chip technology uses a dichroic prism to

separate color into red, green, and blue components, and then directs each color to its own chip for processing. The process results in better color fidelity, reduced color blur, and improved signal-to-noise ratio.

Information other than the video signal can be recorded on a DV tape, however. Standard data such as the date and time of day (and, with DV-format VCRs, the input source and TV channel number) are all recorded automatically—but not into the image. Instead, this data is recorded separately and can be called up for viewing at any time. Camera information, such as “f-stop” settings and auxiliary audio information, is also recorded separately. A “sub-code” sector on the tape contains time-code data, index IDs, and still-photo IDs, facilitating editing, search functions, and video printing, respectively.

Finished in metallic silver, measuring 5.8 x 4.4 x 13 inches (h/w/d) when viewed from the front end, and weighing in at 3.4 pounds, the VX1000 bears a strong resemblance to Sony's CCD-VX3. The first thing you'll notice when you pick the VX1000 up is the squared-off rubber hood that's attached to the lens. It's designed to reduce lens-flare and lends the cam a decidedly cinematic air. You'll also note the new tape-carriage area, the center-mounted color viewfinder, and the small, feature-packed swing-out LCD panel that's

mounted on the back of the cam. There's also a radical new location for the cam's battery: The compact lithium-ion power source is buried deep in the VX1000's heart. Everything from the nicely designed controls to the black illuminated VTR buttons and sturdy magnesium-alloy casing gives this cam a bold look.

Unlike some color LCDs, the VX1000's 180,000-pixel color finder has enough resolution to pick up fine focus distinctions. And the center-mounted stalk provides the versatility that pros demand. In addition to information displayed on the image, there's a striking bright-blue band under the image, which registers time running, battery life, tape remaining, and other shooting information.

The 20X zoom is complemented by the new Super SteadyShot optical image-stabilization system, which Sony claims has more sophisticated lens-movement algorithms for better performance in demanding situations. The system clearly takes aim at high-frequency shake, like the kind you experience in a moving vehicle. I also loved the Readycharge feature, which allows the battery to charge inside the camcorder when it's shut off.

Serious videographers searching for the right mix of manual controls will find that the VX1000 is loaded. Many functions are controlled by buttons positioned below the LCD readout; a

HOLD mode locks in any particular group of manual settings you've chosen, so you won't accidentally defeat or reset them. Most of these controls are easy to use while shooting.

There's a three-mode programmable auto-exposure system, which allows you to work with either shutter or iris priority or in the NATURAL NIGHT mode. There are also individual manual controls for iris and shutter speed; 16 shutter speeds are on tap, ranging from

BY THE NUMBERS

Measurements by Berger-Braithwaite Labs

Horizontal resolution: camera, >500 lines; recorder, 500 lines; EVF, approximately 400 lines

Playback picture S/N: unweighted luminance, 53.6 dB; weighted luminance, 58.8 dB; unweighted video, 49.9 dB; weighted video, 57.3 dB; chroma AM, 64.3 dB; chroma PM, 59.7 dB

Minimum illumination: 11 lux for 50 IRE

Audio frequency response: 20–15,000 Hz +0.2, –0.7 dB

Audio dynamic range: PCM, >90 dB

¼ to 1/10,000 second. The VX1000 also offers full white-balance control, increasing the potential for color accuracy in all lighting conditions. Select CUSTOM PRESET in the cam's menu system and you'll find adjustments for white-balance shift, gain shift, sharpness, and color level.

The focus mechanism gives you lots of options. In addition to full-range autofocus and the lens' manual focus ring, you can access autofocus temporarily via the PUSH BUTTON setting. And then there's the more unusual INFINITY setting: Press and hold the focus-mode switch when you're focused on a nearby subject and you can instantly snap the focus out to infinity and catch whatever's going on in the distance. In general, the VX1000's autofocus system was very fast and stable, hunting a bit only in lower light situations.

Other features you usually see only on professional equipment include a zebra pattern, which indicates areas of overexposure in the viewfinder. Unlike professional cams, however, you can shoot in low-light conditions (down to 4 lux) without a light, though more picture noise is evident in such circumstances (an accessory shoe on the carry

CONTINUED ON PAGE 106

THE SHORT FORM

SONY DCR-VX1000

Component type: DV camcorder

Price: \$4,199

Target: Prosumer and serious amateur videographers

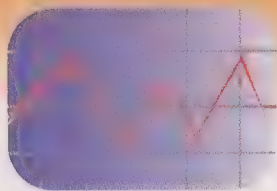
KEY FEATURES

- Digital video recording ■ Three 410,000-pixel CCD image sensors
- Three A/D converters ■ Error correction ■ 500 lines of horizontal resolution
- Swing-out LCD/control panel ■ Advanced image stabilization
- Three-mode auto-exposure ■ 20X zoom ■ 16 shutter speeds
- Manual white-balance adjustments ■ 180,000-pixel 400-line color viewfinder
- Two 12-bit PCM stereo audio tracks ■ Captures high-quality still images with audio
- Custom presets ■ Neutral-density filter ■ Improved battery charging
- Magnesium-alloy chassis ■ LANC remote terminal

SUMMARY

- Easy auto operation ■ Extensive manual options ■ Excellent stabilization system
- Generally fast and stable autofocus ■ Error correction results in dropout-free videos
- Light on special effects ■ Picture performance was spectacular
- Audio performance was very good ■ A brilliant mix of high-tech and excellent features

Circle 133 on reader service card



VIDEO TEST



Dub Lite

Fast's Video Machine Lite works great, and it's less pricey

TEST
818

SERIOUS HOMEBREWED VIDEO PRODUCTIONS REQUIRE serious tools, and Fast's Video Machine Lite clearly inhabits the upper end of the consumer-video post-production spectrum. A slightly slimmed-down version of Fast's innovative Video Machine, the Video Machine Lite is a desktop video editor, titler, and special-effects generator that runs on *Windows* and *Macintosh* computers. And it's one helluva long-distance runner. ♦ The VM Lite (\$2,500)

controls A/B roll edits with prosumer VCRs and camcorders that have either LANC or Panasonic five-pin connections. It features a wide range of 2-D special effects as well as an innovative titling function. Advanced editors can use the VM Lite to control a pro-level RS-232 or -422 edit controller as well as low-impedance audio gear by adding Fast's optional Studio Control box (\$2,250).

The VM Lite for Windows is a sin-

gle full-length card. While Fast says that you can get by with a 386, I don't recommend it—only a 486 or Pentium will have the power and speed you need to take advantage of its capabilities. In any case, the card fits into a standard 16-bit slot. The package includes *Video Machine Studio* software and a cable-splitter interface with 17 connections, which accommodate various editing decks and peripherals such as CD-ROM

and LD players. Cables for controlling LANC and Panasonic five-pin decks aren't supplied, though Fast offers them as options.

Once you've installed the card, you need to install the software, open VM Lite, and run the "Hardware Setup" routine, which will get your computer and VM Lite talking to each other. In most cases, selecting the "Auto Setup" option should work; if it doesn't, there's a "Custom Setup" option that allows you to manually set the appropriate IRQ, I/O address, and memory options.

Setting up edit decks can be tricky. While there are six video inputs on the cable splitter (four S-Video and two BNC-plug composite), for example, you shouldn't simply hook two players into the V1 and V2 inputs, since this will limit your editing options later on—but you only find that

ANYONE CAN SEE THIS IS A BETTER CAMCORDER.

**SHARP
VIEWCAM**

Anyone can see this is an easier, more fun way to record events. After all, Sharp Viewcam lets you see your world through a big, color view screen, not a tiny black and white viewfinder.

You hold it in your hands, not stuck to your eye, so you have freedom to see, record and be a part of what's going on. Now you'll get shots you'd miss with an ordinary camcorder.

**SHOOT AND
PLAY BACK INSTANTLY
ON THE SAME
BIG COLOR
VIEW SCREEN.**

And only Sharp Viewcam has a lens that pivots 270°

UP TO A \$200 REBATE When You Buy A Sharp Viewcam
Offer Expires January 2, 1996

so you can shoot from any position or angle and even put yourself in the picture. Plus, play it back instantly, in full color with sound. All in all, Sharp Viewcam is the most fun you can have with a camcorder. But, anyone can see that.

SPINS,
TURNS AND TWISTS. NOT STIFF AND RIGID



CALL
1-800-BE-SHARP

SHARP
FROM SHARP MINDS
COME SHARP PRODUCTS™

LCD

OUT WITH THE OLD CAM IN WITH SHARP VIEWCAM

Simulated Screen Image

Circle No. 77 ON READER

out by making this mistake. In addition, if your record deck doesn't read or write its own time code, the best way to get accurate editing results is to run the video output of your record deck back into one of the composite inputs of the VM Lite, which writes its own form of time code, known as VITC (Vertical Interval Time Code). Setting up audio and control gear, on the other hand, is pretty straightforward.

Once you've got your gear hooked up, you need to go into the "VM Studio" and select appropriate drivers. The VM Lite comes with drivers for over 400 different edit decks, though a number of popular low-end prosumer models (such as Sony's TR-400 and TR-700 camcorders) aren't included. If your gear isn't listed, you may be able to get by using one of the generic LANC drivers or with a driver for a similar model, though with lesser accuracy and/or control. At this stage, you also dictate which deck is the player and which is the recorder, which audio channels each player is using, and what time code, if any, is being used.

The next step is to log the footage you intend to edit into the "VM Studio"—load the first tape you intend to edit into your player deck, create a "New Reel Group" in the "Project Manager," and give it a name so the VM Lite can recognize it. A small control panel similar to that on a VCR's remote control will appear; it controls the deck. Use it to find the first clip you want to use, freeze-frame it where you want the clip to start, and select the "mark-in" point. Then play the clip

until you reach its end and select the "mark-out" point. Give the clip a name and take-number via the "notepad" icon, then select "use" to log the clip. Select "new" when you're ready to move on to the next clip. Once you're done with that reel, repeat the process with the next tape, either in the same player if you only intend to perform A/X roll editing or in a second player if you want A/B roll capability.

After you've logged your clips, you can start editing by placing them in the timeline that appears above the "Project Manager": Click on the first clip from the reel group and, holding down the mouse button, drag it into the "V1" line of the timeline; conveniently, the companion audio automatically drags up to the appropriate audio track. Next—and this is very important—select the transition that'll lead this clip in from black. This crucial step tells the VM Lite what should lead into the first clip. A similar step configures the first audio transition. From there, place your second clip on the "V2" track, directly after the end of the first clip, and join them with a transition.

Once you get the basics down, you can really have fun. The huge library of transitions and digital video effects enable you to do just about everything a professional post-production house can do—for a fraction of the cost. You can even add graphics right off of your computer—the VM Lite supports most major graphics formats, including .TIF, .GIF, .JPG, .PCX, .BMP, and .EPS.

The VM Lite's titling capability is unusual but extremely flexible. Instead

of a "title" setting, the "VM Titler" is a true printer driver that enables you to design a title in any graphics, page-makeup, or word-processing program that prints and then set the title to "print to video." The printer menu gives you the option to "key out" the background color, have the title roll or crawl, and/or add effects. Some word processors work better than others, however.

Once you've finished arranging your timeline, you can preview it or simply start recording. As always, previewing is a good idea, since you may have forgotten a clip or mishandled a transition. Once you're ready to record, you simply make sure the appropriate tapes are in the players and a time-coded tape is in the recorder, then click on the "record" icon at the top of the timeline.

Finally, the VM Lite's learning curve is pretty steep. The 800-page manual is comprehensive, but difficult to navigate. Fortunately, a simpler revised manual is in the works, and Fast's tech-

BY THE NUMBERS

Measurements by Berger-Braithwaite Labs

Horizontal resolution: 260 lines

Picture S/N: unweighted luminance, 56.3 dB; weighted luminance, 60.4 dB; unweighted video, 49 dB; weighted video, 57.7 dB; chroma AM, 59.2 dB; chroma PM, 54.2 dB

Audio insertion gain: 1.3 dB

Audio frequency response: 30–20,000 Hz +0, –5.5 dB

Audio S/N: 67.9 dB

Total harmonic distortion: 0.2%

THE SHORT FORM

FAST VIDEO MACHINE LITE

Component type: 16-bit editing card

Price: \$2,500

Target: Prosumer or serious amateur video editors

Minimum requirements*: 486 PC or Macintosh, editing VCR, playback VCR

KEY FEATURES

- 2-D special effects ■ Frame-buffering/time-base correction
- Titling ■ Four S-Video inputs ■ Two composite BNC inputs ■ A/B roll editing ■ A/X roll editing ■ Huge library of transitions ■ Supports most major graphics formats

SUMMARY

- Extensive editing control ■ Steep learning curve ■ Helpful tech support
- No better "soup-to-nuts" solution for home-video post-production

Circle 134 on reader service card

**To maximize its potential*

support line is extremely helpful. In addition, there's a useful forum on Compuserve (GO FAST), where both tech-support personnel and other users can help you out.

THANKS TO ITS COMBINATION OF EDIT control, extensive special effects, and titling capability, there's no other post-production setup in this price range that can touch the VM Lite. Even NewTek's vaunted Video Toaster ["VIDEO Test," March 1991], the VM Lite's closest competition, doesn't offer edit-control capability or frame buffering/time-base correction. In short, you'll be hard-pressed to find a better "soup-to-nuts" solution to your video post-production needs. ■

Most speakers that call themselves multi-media don't even deserve to be called speakers.

While the hi-fi speakers worthy of their name won't function or even fit in most surround sound,

home theater, computer, MIDI or mini system applications, Celestion solves this dilemma

**The First Loudspeaker
at Home in All Media.**

elegantly with the Style Series, packaging their 70 years of loudspeaker experience in

magnetically shielded, weather-resistant enclosures with universal mounting systems.

Where in your home will your new Style speakers sound the best? Wherever you want.

CELESTION

The Difference is Fundamental.

ORIGINAL MASTER RECORDING



UDCD 639

ULTRADISC II™
— The GAIN System —



UDCD 640



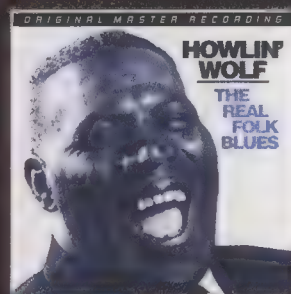
UDCD 641



UDCD 642



UDCD 643



UDCD 645



NEW RELEASE UDCD 647



NEW RELEASE UDCD 648



NEW RELEASE UDCD 649

Nature's Encore

Better Sounding Music. Upgrade to Ultradisc II™.

Your favorite artists sound surprisingly better on Ultradisc II™. Why? Because Mobile Fidelity's mastering technology is a cut above—and you can hear the difference. As the creators of the 24k gold audiophile CD, we have developed major advances such as The GAIN System™, a proprietary mastering system that uses the highest grade of digital technology available. Starting with the original master tapes, we are able to capture every last nuance of the original recording. What does this mean? You'll hear music like you've never heard it before!

Ultradisc II™ The Original 24K Gold Audiophile Compact Disc

To receive a color catalog of The GAIN System™ technical paper, call 800-423-5759.



105 Morris Street • Sebastopol, CA 95472
WWW.MFI address <http://gain.com/gain/bus/mfi/>
In Canada call 1-800-267-1216

SOFT WIRE

The latest and greatest on tape and disc

PULP FICTION

IT'S FILLED WITH PEOPLE YOU'D NEVER want to meet, but that doesn't stop *Pulp Fiction* (Miramax; VHS, priced for rental, CLV disc, \$40) from being a killer slice of entertainment. Writer-director Quentin Tarantino plants the viewer in a frightening world of drugs and death, but the pervasive violence is offhanded in the best black-humor traditions and is drawn out deliciously. No wonder this hip horror show charmed the Hollywood establishment into bestowing an Academy Award on its screenplay.

Tarantino has pulled off a trick that dates back to the French New Wave—namely, turning gangster-movie conventions on their heads. The plot is slight, but that doesn't detract from its impact: *Pulp Fiction* consists of three short stories, all united by the presence of two angels of death, played by John Travolta and the thoroughly mesmerizing Samuel L. Jackson. Each story (a date ends in an overdose; a boxer flees a fixer; a corpse needs to be disposed

of) has its own resolution, but Tarantino keeps the audience off-balance with continuity tricks, long dialogue-free sequences, hypnotic camera moves, and, as always, unnerving violence. The pan-and-scanned tape may cramp the action sometimes, but *Pulp Fiction*, to paraphrase Godard, will leave you breathless.

—Andy Wickstrom

OUTBREAK

WE HAVE MET THE ENEMY, SAYS director Wolfgang Petersen's terrifying *Outbreak*, and though it's only one-billionth our size, it can liquefy our internal organs in 24 hours. Welcome to the biomedical thriller, 1990s-style. *Outbreak* (Warner; VHS, priced for rental, CLV/CAV discs, \$40) is the first in what will surely be a long string of horror flicks devoted to killer microbes, and it's tough to resist simply because its basic premise is 100-percent plausible.

Could it happen here? *Outbreak* says "yes," as the lethal (and fictional) Motaba virus is transported from Africa to sunny California by a poached and illegally imported pet monkey. The virus is even smarter than the monkey, and it quickly mutates so that it can be transmitted through air. Before you can say "quarantine," the entire Western world

is in grave danger. To the rescue come a pair of recently divorced army medical researchers (Dustin Hoffman and Rene Russo), who identify and battle the bug. Test tubes and blood samples aren't that exciting, though, so the dynamic duo also wind up fighting a secret government conspiracy, with Donald Sutherland as an excellent villain.

Yes, *Outbreak* veers from the realistic (I really



Gifted: *Sleeping's* Bullock, Pullman

never thought I'd see Dustin Hoffman lead an army chopper through aerial combat), but by the time it does, it won't matter because you'll already be hooked. An explosive Dolby Surround mix raises the movie's home-theater quotient, especially on the outstanding laser edition.

—Ken Korman

WHILE YOU WERE SLEEPING

EVERY SO OFTEN A BIT OF FLUFF defies gravity and rises into the firmament of hit pictures, propelled by nothing so much as the likability of its stars. It happened in 1993 with *Sleepless in Seattle*, and it's déjà vu all over again with *While You Were Sleeping* (Hollywood; VHS, priced for rental, CLV disc, \$40). Maybe we can chalk their success up to sleep deprivation.

In *Sleeping*, the spunkily sparkling Sandra Bullock plays a lonely Chicago Transit toll taker who saves a handsome stranger (Peter Gallagher) from death on the El train tracks. While he's in a coma, she lets his colorfully quirky family believe she's his fiancée, and they—*shock of the year*—open their hearts to her. The big plot turn occurs

Triple threat: *Pulp Fiction's* Jackson, Travolta, Keitel





Boo, hiss: Ricci and friend in *Casper*

when the "sleeping" man's brother (Bill Pullman), who was initially suspicious of the winsome Bullock, falls in love with her. Guilt descends on lead wings: Dare he supplant his unconscious brother? And dare she let him? Not surprisingly, this date-night confection has a happy ending. I found it pat and predictable, but millions of others swooned. —AW

CASPER

TIMES ARE CERTAINLY TOUGH FOR Hollywood blockbusters. When they're not going \$100 million over budget (*à la*—what else?—*Waterworld*), they're suffering from an identity crisis. That's the problem that plagues *Casper* (MCA/Universal; VHS, \$23, CLV disc, \$35), though that didn't stop it from making big bucks at the box office.

Casper was directed by a special-effects techie named Brad Silberling, and it shows. Silberling doesn't seem to know where to take the story, and lets the special effects and nostalgically jokey cameos (from the likes of Clint Eastwood and Dan Aykroyd) set the tone. The plot, which involves a "ghost psychiatrist" (Bill Pullman) and his daughter (Christina Ricci) trying to rid

a treasure-laden house of annoying spirits and contact the girl's recently deceased mom, seems beside the point.

Despite its cloying slickness, *Casper* has a secret weapon in Christina Ricci, who provided the real spark in both Addams Family movies with her devilish turn as Wednesday, the pint-sized princess of darkness. Virtually glowing with talent and smarts, Ricci imbues the lifeless *Casper* with a frisky pulse.

—KK

NOBODY'S FOOL

Poor Sully, the hero of *NOBODY'S Fool*, can't catch a break. He's 60 years old and still looking for the right career path. The local cop is out to get him, his knee has just about given out, and his landlady's obnoxious son wants to throw him out on his ear. But Sully's life is about to change. Writer-director Robert Benton (*Kramer vs. Kramer*) created the character of Sully expressly for Paul Newman, and once you see the actor sink his teeth into this remarkably juicy role, you know that nobody else could've done it.

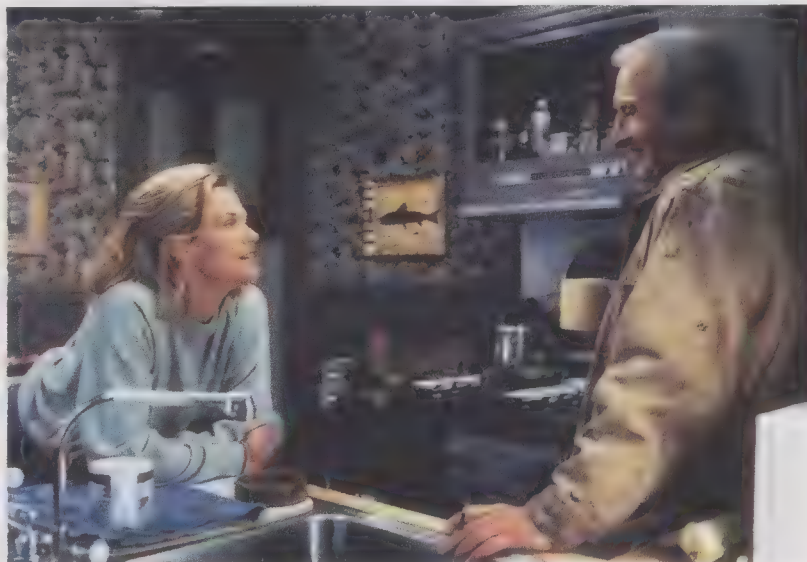
Nobody's Fool (Paramount; VHS, priced for rental, CLV disc, \$40) captures the rhythm and feel of small-town life, of places where people know all about each other's business but manage to live together anyway. It can be a tough cinematic trick to pull off, but Benton and the strong cast proves able; it's clear that Newman's professional-

ism and enthusiasm rubbed off on everyone around him. Melanie Griffith reaches a career peak in a wonderfully nonglamorous role, and Bruce Willis, in a key (and uncredited) performance, seems honored to be sharing the set with the master. Someday, when people tick off the essential Newman canon, *Nobody's Fool* will be up there with *Hud*, *Cool Hand Luke*, and *Butch Cassidy and the Sundance Kid*. —KK

LOSING ISAIAH

THE SIGHT OF A CHILD BEING wrenched from an adoptive family and forcibly returned to his or her biological parents is compelling enough, but *Losing Isaiah* (Paramount; VHS, priced for rental, CLV disc, \$40) adds the element of race, as Jessica Lange struggles to keep custody of a black child abandoned in infancy by Halle Berry. The movie has all of the ingredients of a weepy soap opera, but director Stephen Gyllenhaal (*Killing in a Small Town*) rarely succumbs to melodrama and elicits finely tuned performances from his two stars.

Lange and Berry are riveting as two desperate mothers—one is a do-gooder filled with righteousness, the other a former dope addict seeking salvation. Of the pair, Berry makes the greater impression, as her complex character rises from a ghetto of soullessness to become a proud, determined woman. The impeccable Samuel L. Jackson



Kitchen think: Griffith and Newman in *Nobody's Fool*

lends ample support as Berry's lawyer.

Bonus: This is one film about race that doesn't deal in violence. —AW

DON JUAN DEMARCO

IS DON JUAN DEMARCO (JOHNNY DEPP) really the fabled Spanish lover Don Juan, or just a fairly nutty guy from Queens? Only his psychiatrist (Marlon Brando) knows for sure. Or does he? In *Don Juan DeMarco* (New Line/Image;

VHS, priced for rental, CLV disc, \$40), writer-director Jeremy Leven has carefully built the kind of crowd-pleasing romantic fantasy that'll keep you guessing.

Huge and diverting, Brando rises to the occasion in his key scenes with the always wonderful Depp. (Thank goodness that Keanu Reeves, who auditioned for the ladykiller role, was passed over.) And every time the movie

starts to bog down, Leven returns to Don Juan's colorful tales of harems and forbidden trysts. As a date video, I can assure you that *Don* is uncommonly effective. —KK

HIGHER LEARNING

LIKE SPIKE LEE'S *DO THE RIGHT THING*, *Higher Learning*, the third film from the talented John Singleton, is an ambitious tale about the inevitability of con-

NOW IN STORES

THE BASKETBALL DIARIES

1995. Leonardo DiCaprio, Lorraine Bracco; dir. Scott Kalvert. A disappointing film of Jim Carroll's candid downtown autobiography, though it's always exciting to see the enormously talented DiCaprio at work. Dolby Surround. (R) 102 min. VHS priced for rental. LD letterboxed (1.85:1) \$35. Polygram.

BATMAN FOREVER

1995. Val Kilmer, Tommy Lee Jones, Jim Carrey, Chris O'Donnell, Nicole Kidman; dir. Joel Schumacher. The big-buck batcaper wings past its predecessors thanks to Kilmer's restraint and Carrey's dementia. Dolby AC-3 Surround. (PG-13) 122 min. VHS \$20. LD letterboxed (1.85:1) \$40. Warner.

DESTINY TURNS ON THE RADIO

1995. James Le Gros, Dylan McDermott, Nancy Travis; dir. Jack Baran. In Las Vegas, a casino owner, a bank-robber, his girlfriend, and a hotel manager each meet mystery man Johnny Destiny (Quentin Tarantino). Where Tarantino goes, rock-and-roll postmodernism is never far behind. Dolby Surround. (R) 102 min. VHS priced for rental. LD letterboxed (1.85:1) \$40. HBO.

EXOTICA

1995. Bruce Greenwood, Mia Kirshner; dir. Atom Egoyan. Egoyan tells the story of lapdancing from both sides of the lap, examining the complexities of strip-club stalwarts. Digital Hi-Fi Stereo. (R) 104 min. VHS priced for rental. LD (1.85:1) \$40. Miramax.

FRENCH KISS

1995. Meg Ryan, Kevin Kline; dir. Lawrence Kasdan. French thief Kline helps Ryan win her fiancé back from a Parisian beauty. Mixing the stars with the City of Light should have netted great romantic comedy, but it just doesn't click. Dolby Digital Stereo. (PG-13) 111 min. VHS priced for rental. LD letterboxed (2.35:1) \$40. FoxVideo.

FRIDAY

1995. Ice Cube, Chris Tucker; dir. F. Gary Gray. Ice Cube has 24 hours to help his friend pay back some hoods 'n the hood, or else. Another crazy comedy with a phat rap

soundtrack from the producers of the *House Party* trilogy. Dolby Surround. (R) 91 min. VHS priced for rental. LD letterboxed (1.85:1) \$40. New Line/Turner/Image.

JASON AND THE ARGONAUTS

1963. Tod Armstrong, Honor Blackman; dir. Don Chaffey. A new digital transfer of the great fantasy movie includes an interview by John Landis with special-effects pioneer Ray Harryhausen. Mono. (NR) 103 min. VHS priced for rental. LD letterboxed (1.35:1) \$35. Columbia TriStar.

JEFFERSON IN PARIS

1995. Nick Nolte, Greta Scacchi; dir. James Ivory. The usually on-target Merchant-Ivory team didn't get this tale of another lusty American president quite right. Hi-Fi Stereo. (PG-13) 139 min. VHS priced for rental. LD letterboxed (1.85:1) \$35. Touchstone.



Shoot to thrill: Greenwood in *Exotica*

MAJOR PAYNE

1995. Damon Wayans; dir. Nick Castle. Wayans is a Rambo-like killing machine assigned to whip a troop of kid cadets into shape. It might have made a good 5-minute sketch on the old *In Living Color* TV show. Stereo Surround. (PG-13) 98 min. VHS priced for rental. LD letterboxed (1.85:1) \$35. MCA/Universal.

PANTHER

1995. Kadeem Hardison, Courtney B. Vance; dir. Mario Van Peebles. A charged tale of the controversial civil-rights protesters. Van Peebles does a fine job of showing

ordinary people caught up in an extraordinary situation and time. Dolby Surround. (R) 123 min. VHS priced for rental. LD letterboxed (1.85:1) \$35. Polygram.

THE SANTA CLAUSE

1994. Tim Allen, Judge Reinhold, Wendy Crewson; dir. John Pasquin. A surefire blockbuster, as divorced-dad Allen gets a job as Santa and grows up as a result. Dolby Surround. (PG) 97 min. VHS \$23. LD letterboxed (1.85:1) \$30. Disney.

STUART SAVES HIS FAMILY

1995. Al Franken, Laura San Giacomo; dir. Harold Ramis. Franken, as a feelgood pop-therapist, learns to accept the loss of his cable show and deal with his dysfunctional (read: normal) family; expanded from the *Saturday Night Live* sketch. Dolby Digital Stereo. (PG-13) 97 min. VHS priced for rental. LD letterboxed (1.85:1) \$40. Paramount.

THUNDERBALL COLLECTOR'S EDITION

1965. Sean Connery, Adolfo Celi, Claudine Auger, Bernard Lee; dir. Terence Young. *The Bond's* undersea adventure returns remastered from the original negative in a THX-certified boxed set, which includes interviews with the principals and behind-the-scenes footage. Dolby Stereo. (PG) 130 min. LD letterboxed (2.35:1) \$125. MGM/UA.

TOMMY BOY

1995. Chris Farley, David Spade, Bo Derek; dir. Peter Segal. Recipe for a moderately successful movie: Put two *Saturday Night Live* stars in a car and make a dumber-than-dumb on-the-road movie. Dolby Digital Stereo. (PG-13) 98 min. VHS priced for rental. LD letterboxed (1.85:1) \$40. Paramount.

WHITE DWARF

1995. Paul Winfield, Neal McDonough, Michael McGrady; dir. Peter Markle. Geeky young doctor battles evil, falls in love with a princess, and mentally jousts with aliens on the strange Planet Rusta; originally a Fox TV movie. Hi-Fi Stereo. (NR) 95 min. VHS priced for rental. Cabin Fever. —Josef Krebs

LABELS FOR LESS

AS WINTER APPROACHES, YOU'LL NEED something epic to lift you up and send you on your way: MCA/Universal blows up with *Written on the Wind*, *Tobruk*, and *Midway* (\$15 each), while Columbia TriStar tells tall tales of old with *Legends of the Fall* and *Mary Shelley's Frankenstein* (\$20 each) and MGM/UA remembers *The Alamo*, *How the West Was Won*, *Doctor Zhivago* and that *It's a Mad, Mad, Mad, Mad World* (\$25 each). If you'd prefer a thoughtful look back, Hallmark offers *Henry V*, *Hamlet*, and *Oliver Twist* (\$20 each), *The Red Shoes* (\$15), *Jungle Book* (\$10), and Hitchcock's *The Lady Vanishes*, *The 39 Steps*, *Young and Innocent*, and *Sabotage* (\$10 each); Columbia TriStar says arise Sir Anthony (Hopkins, that is) with a boxed set of *Howards End* and *Remains of the Day* (\$35) and *84 Charing Cross Road* (\$20);



National Velvet's Rooney, Taylor

MGM/UA offers adaptations of literary classics kids love like *The Wizard of Oz*, *Chitty Chitty Bang Bang*, *Little Women*, *National Velvet*, and *A Christmas Carol* (\$15 each), along with great Hollywood classics *12 Angry Men*, *Some Like It Hot*, and *Casablanca* (\$20 each). Finally, we have the essentially epic, literary, and classy *Attack of the Killer Tomatoes*—and it's the original director's cut, no less (\$13). —JK

flict. Using an imaginary liberal arts college as a microcosm of America, the director presents a diverse group of young characters with unresolvable differences. Their challenge is to grow from conflict without letting it destroy them.

Singleton handles the large cast and intricate storylines with remarkable grace, and *Learning* simply bursts with life. Skins may be black and white, but characterizations seldom are, and Singleton's depiction of the skinhead ethic provides a tremendous amount of insight into this too-real danger—it does *Schindler's List* proud. Despite a few melodramatic turns, *Higher Learning* is a great film about important questions it doesn't pretend to be able to answer.

—M. Faust

RED

FOLLOWING THE DISAPPOINTING *BLUE* (1993) and *White* (1994), *Red*—the third and last installment in the “three colors” trilogy from Krzysztof Kieslowski, the Polish-born director—manages to rectify many of its precursors' problems, but not without a fight. The first two installments in the director's ambitious three-part address on the state of French society offered only the briefest of insights to clarify the films' huge emotional voids (though that might have been Kieslowski's point). *Red* (Miramax; VHS, priced for rental, CLV disc, \$40), on the other hand, comes through as an enticing meditation on chance, coincidence, and destiny—but the whole thing is still as slippery as a butter-drenched escargot.

A portrait of how three lives—that of a beautiful young model (Irene Jacob), a bitter retired judge, and a troubled student—intersect, *Red* achieves a certain poetry. But the film's key moments are mostly spent in simple conversation, and many viewers will find it slow going. It's best viewed on laserdisc, where the endless shots of the luminous Ms. Jacob are faithfully reproduced. Kieslowski's camera leaves the impression that anything worth saying can be found in her sad and beautiful countenance. —KK

THE MADNESS OF KING GEORGE

UNEASY LIES THE HEAD THAT WEARS the crown—especially when that head is beset by ills that befuddle the rudimentary science available in the time of England's George III. So sayeth *The Madness of King George* (Hallmark; VHS, priced for rental, CLV disc, \$40), in which Nigel Hawthorne transplants the role he created for the British stage. *Madness* is a costume drama that remains witty and thoroughly engaging despite its unusual subject: a descent into mental confusion.

As the hapless George, Hawthorne acts up a storm, spewing forth grandiosity one moment and royal temper the next; while he languishes in isolation, political vultures plot to put his compliant son on the throne. Hawthorne earned an Academy Award nomination for his pains, as did Helen Mirren as his put-upon wife, and the movie

earned an Oscar for its convincing art direction. This makes the cropping on the VHS tape all the more tragic, as it ruins many of the compositions and adds a new twist to the notion of “off with their heads.” —AW

CIRCLE OF FRIENDS

AT A TIME WHEN TALKY ACCOUNTS OF Generation X angst prevail, *Circle of Friends* (HBO/Savoy; VHS, priced for rental, CLV disc, \$40) is a refreshing alternative. While set quite firmly in Ireland in the 1950s, *Circle*'s characters and situations are as timely as any contemporary coming-of-age story. And Pat O'Connor's film has the subtle texture you'd expect of a Merchant-Ivory project.

It deals with tradition, religion, and sexual repression, all within the framework of a tasteful if somewhat predictable story. Overshadowing Chris O'Donnell's likable turn as a stock preppie is newcomer Minnie Driver, whose delectable appeal—a balance of vulnerability and strength—will steal your heart.

Circle is nicely composed, and while acceptable in its full-screen version, it's clear that only the widescreen disc can preserve the numerous shots of two or more characters walking side by side.

—Bruce Lawton

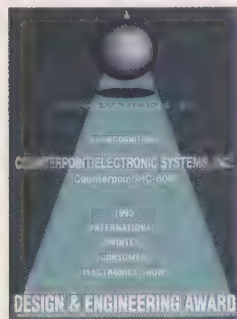
TOM & VIV

AT THE OPENING OF *TOM & VIV* (Miramax; VHS, priced for rental, CLV disc, \$40), a young T.S. Eliot has just met Viv, a high-spirited and adoring young woman. Eliot (Willem Dafoe) is the genius poet who opens up her world, while the brilliant Viv (Miranda Richardson) helps him with his work—and also comes from the upper English crust from which he craves acceptance. It's love at first sight, of course, but it turns out that a second, closer look would have been wise move on Eliot's part, as chaos and terrible tragedy follow.

Dafoe and Richardson's work in *Tom & Viv* is both painful and fascinating to watch. The two actors are brilliant, bringing a searing intensity to their roles. And the tragedy is almost numbing. Two lives were devastated, but the relationship inspired Eliot's masterpiece, *The Wasteland*. The greatest

With Counterpoint Home Cinema, you no longer have to sacrifice your first love...MUSIC (or your first born, either).

"By high end standards, the HC-808 is not especially pricey. But it sounds wonderful...it has taken over my No.1 spot for sheer musicality among all processors."~LAWRENCE JOHNSON, AUDIO VIDEO INTERIORS



"...it's the first sub-\$2,000 decoder I've ever used that doesn't sound like it trades neutrality and transparency for whiz-bang wonder special effects...The message is clear: cost conscious audiophiles no longer have an excuse for keeping Home Theater Products away from their purist installations."~KEN KESSLER, SOUND & IMAGE



"The system, which costs \$3900 with dual subwoofers, may be our favorite home theater speakers ever."~BRETT BUTTERWORTH

VIDEO magazine, January 1995



We'd love to hear what you have to say. Please call for your nearest Counterpoint Authorized Dealer.

COUNTERPOINT. THE AUDIO TECHNOLOGY COMPANY.

2281 Las Palmas Dr., Carlsbad, Ca. 92009. Toll Free: (800) 275-2743. Fax: (619) 431-5986.

CIRCLE NO. 86 ON READER SERVICE CARD



King for a day: *Labyrinth*'s Bowie

Goblin King (he also performs five engaging songs). The Image remaster is marvelous, presented at last in the theatrical 2.35:1 JDCScope (AKA John Dunton Cameras, a Panavision competitor in the '80s). Collectors will find the Japanese-pressed disc and informative gatefold a joy to behold, and the superb soundtrack is the perfect complement for the outrageous, razor-sharp visuals. In short, it's everything you'd expect from these very talented artists.

—Mel Neuhaus

compliment I can pay *Tom & Viv* is that it makes you wonder if the ends justify the means.
—JK

THE HISTORY OF ROCK 'N' ROLL

ROCK 'N' ROLL IS A MISNOMER. "There's no such thing . . . it was named out of necessity." So observes Little Richard during the early goings of *The History of Rock 'N' Roll* (Warner/Time-Life; VHS box set, \$200, CLV-disc box set, \$200), a flashy 10-hour documentary about—well, you know.

Little Richard is right, of course—the term rock-and-roll is just a label. *History*'s producers are well aware of the fact, wisely giving equal weight to pioneers of blues, R&B, and rap. Rock has always been at its best when it exhibits the three Rs—rebellion, revolution, and renewal—and *History* captures this vibrancy in the chapters that explore punk, the British Invasion, guitar heroes, and folk (especially Bob Dylan's infamous 1965 "electric" set).

Most of the major players who've survived get showcased in original interviews; The Who's Pete Townshend is particularly articulate, insightful, biting, and humorous. While some will disparage the canonization of this most frenetic of artforms, *History* makes a case for keeping it all in context.

What's in store for rock's future? As Devo's Gerald Vincent Casale puts it, "More surprises, both hideous and wonderful."
—Mike Mettler

LABYRINTH

LABYRINTH IS AN ORIGINAL, BOLD, AND frightening allegory wittily scripted by ex-Monty Pythonite Terry Jones and co-produced by George Lucas, and it's certainly director Jim Henson's best movie. Not convinced to take the plunge? *Labyrinth* (1986; New Line/Image; CLV disc, \$40) also earns a coveted spot next to *The Wizard of Oz* as an outstanding treat for all ages.

The film follows the lovely Jennifer Connelly and her adventures in Goblinland, where she has thoughtlessly banished her baby brother. David Bowie, decked out in a vintage Tina Turner-styled 'do, is the seductively charming

ROB ROY

VIEWERS EXPECTING A REMAKE OF the 1954 Disney film of the same name are in for a shock. As vulgar as it is violent, this *Rob Roy* (MGM/UA/Pioneer; VHS, priced for rental, CLV disc, \$45) is nothing if not adult. Liam Neeson is suitably noble as the legendary 18th-century clan leader who stood up against unjust British rule. Unlike *Braveheart*'s William Wallace, this Scot is a man of peace for whom violence is a last resort, though resort he does. Tim Roth steals the film as the foppish but deadly villain, while Jessica Lange stands out among these highlanders like the ex-fashion model she is. The lensing of the beautiful Scottish landscape suffers in the VHS tape's pan-and-scan transfer, though the film's major flaw—too much length, too little story—survives intact.
—MF



Scotch knave: Liam Neeson stands tall in *Rob Roy*

ORSON WELLES' OTHELLO

ORSON WELLES' 1952 DISTILLATION OF William Shakespeare's play *Othello* is one of the actor-director's greatest works: a visual poem delineating the nature of evil. And the transfer done by The Criterion Collection for

casionally indistinct dialogue, and all. It was the right decision—not only because the music sounds more natural, but because Welles' vivid use of sound and spatial effects closely matches the intense visuals. Analog-track commentary from Peter Bogdanovich and *Othello* producer Myron Meisel is a tad overdone, but generally illuminating;

other supplementals include some previously unseen material on the film's legendary troubled production, Welles' own *Filming Othello* documentary, and *Return to Glennascaul*, a short film made during a hiatus in *Othello*'s shooting schedule. All in all, it's a major addition to the laser discography.

—Sol Louis Siegel

DEAD, ALIVE

WITH THE PASSING OF GRATEFUL DEAD bandleader Jerry Garcia on August 9, an era in rock music, and popular culture, officially ended. The Dead are well represented on video, with more to come: Two films—a documentary about Deadhead culture, and a feature executive-produced by Paul McCartney (!)—are scheduled to hit theaters this fall. Here's the home-video lowdown: 1977's *The Grateful Dead Movie* (Monterey; VHS, \$30) is the



Dead Ahead (1995)

essential concert-going experience. 1987's *The Making of the Touch of Grey Video and More* (Arista/6 West, VHS, \$20) is a behind-the-scenes look at the making of the (surprise) "Touch of Grey" video, complete with its infamous "Dead-as-skeletons" sequences. 1987's *So Far* (Arista/6 West, VHS, \$13; Pioneer, CLV disc, \$30) augments a live performance with animation and graphics. 1992's *Backstage Pass* (Grateful Dead; VHS, \$20) culls footage from the band's personal archives, including their well documented trek to Egypt in 1978. Finally, 1995's *Dead Ahead* (Monterey; VHS, \$25) covers the band's 1980 shows at New York's Radio City Music Hall, which were broken up into distinct—and telling—acoustic and electric sets. —MM

their superb deluxe edition (CAV/CLV discs, \$100) is simply stunning. Interestingly, Criterion has eschewed the revamped soundtrack done for the film's 1992 reissue in favor of Welles' original version—uneven lip-synching, oc-

Edit Suite ... let the good scenes roll!

The Edit Suite A/B roll edit controller lets you perform A/B/C/D rolls from four video sources!



Edit Suite defines editing versatility: ☐ It controls both consumer and professional VCRs, supporting Control-L, Control-M, RS-232, and

Edit Decision List (EDL). ☐ The EDL stores up to 250 scenes. ☐ You can export EDL data to your computer for storage. ☐ You can also



Dissolve from one scene to another; preview your edits; and automatically trigger over 200 digital transition effects when you use Edit Suite with the Videonics Digital Video Mixer.

RS-422 protocols. ☐ It reads RC, VITC, and LTC timcodes. ☐ Two GPI triggers control external mixers, titlers, and SEGs. ☐ When used with Videonics' Digital Video Mixer, it rolls between any of four sources; when used with other GPI-compatible mixers, it works as a two-source A/B roll controller. ☐ The user-friendly control panel has a jog/shuttle wheel for precise VCR control and a back-lit LCD that displays the

such as insert edits, split edits, and more.

☐ Edit Suite is just \$699*.

CALL 1-800-338-7017 for your nearest dealer or authorized mail order house.
*U.S. suggested retail price. Mixer sold separately. All Videonics products carry a 2-year limited warranty. Ask about our national seminar program.

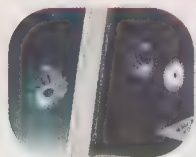


VIDEONICS
The Video Editing Company

1370 Dell Avenue • Campbell, CA 95008 • 408-866-8300

© 1995 Videonics, Inc. Subject to change without notice. Videonics logo and Video Edit Suite are registered trademarks of Videonics, Inc. TV screens are simulated.

MULTIMEDIA



TECHNOLOGY

LOOK SHARP

MPEG-1 Is an Incremental Improvement in PC Video

IF YOU'VE BEEN DISAPPOINTED BY the quality of PC-based video, you'll be happy to hear that it's getting better. Thanks to a new generation of hotshot processors, sophisticated software, and powerful graphics cards, multimedia PCs (MPCs) can display higher-quality MPEG-1-compressed video. MPEG-1, also used in Video CDs and early incarnations of DSS, displays 30 frames per second (fps) with VHS-level quality. Most important, MPEG-1 video plays back readily on affordable CD-ROM players: Any 2X or faster drive can deliver MPEG-1 video to an MPC, while the compact format allows a CD-ROM disc to hold more than 70 minutes of compressed video. VHS-quality isn't much by videophile standards, of course, but most people find it very respectable.

We've come a long way from 1992, when Microsoft first rolled out its *Video for Windows* software. At that time, the average system packed 4 MB of RAM, had a hard-disk capacity of about 120 MB, and used an Intel 386 chip running at 25 MHz or so. (That's one-tenth the power of today's Pentium desktop machines.) The result: grainy, choppy, and just plain miserable video playback that turned the whole concept of "multimedia" into a bad joke. Worse, the compression schemes used to squeeze PC-based video—such as Intel's Indeo and Radius' Cinepak—were inefficient formats that couldn't preserve image fidelity and keep files at a manageable size.

Today, the 386 has given way to the Pentium, those 120-MB hard drives have been replaced by 1.2-GB behemoths, and many multimedia systems come loaded with 16 MB of RAM. PC-based video has improved dramatically as a result, with the digital video in



most CD-ROM titles and games playing back at an adequate 15 fps at sizes as large as 320 x 240 pixels. But the Indeo and Cinepak codecs still can't match VHS-quality, the minimum expectation of most users.

The advantage of MPEG-1 video is that it's both attractive and compact. Indeo and Cinepak can produce high-quality 30-fps video, but only at data rates of 300 kbps or more. This high rate not only strains most CD-ROM players, it also halves the number of minutes of video that can be stored on a disc. MPEG-1 video, on the other hand, moves data at just 150 kbps, and that's well within the limits of today's 2X CD-ROM players.

Squeezing good-looking video into such a small space takes a lot of work, however, and until recently PCs needed a dedicated board to handle MPEG-1 video—at a cost of \$400 or more. The extra cost meant that CD-ROM software companies craving a mass market

wouldn't use MPEG-1 video in their titles. Several developments have changed things for the better.

Affordable MPCs based on Intel's Pentium processors—particularly those

ON THE INSIDE

NEW TECH
100SHORTWARE
100SOFTWARE
102

running at 90 MHz and above—pack enough horsepower to decompress MPEG-1 video without need for that dedicated board. In addition, Microsoft, Intel, and others have tailored the graphics systems in *Windows 3.1* and *Windows 95* to work efficiently with video. At the same time, graphics-

A separate MPEG-1 board plugs into a standard ISA slot and hooks into a graphics card.

board vendors such as ATI Technologies and Diamond Multimedia have added video enhancements to their graphics boards. They not only ease the CPU's video workload, but also include hardware for expanding small video windows up to full screen, using tricks such as pixel-averaging to maintain acceptable image quality at larger sizes.

MPEG-1 video won't play itself, though—try to open a file with an .MPG extension in a *Windows Media Player* applet and you'll get a rude error message. So board makers have begun including MPEG-1 playback software with their products. The most popular software is the *XingMPEG Player*, from Xing Technology; peers include software from CompCore and Mediamatics. Install the software, and *Windows' Media Player* plays MPEG-1 files just as it would .AVI files compressed with Indeo or Cinepak. In addition, Microsoft has licensed Mediamatics' MPEG-1 playback software for future versions of *Windows 95*—making MPEG-1 video a standard feature on most new MPCs.

The good news isn't all good, however, since you still can't expect flawless performance with even MPEG-1-based MPC video. Vendors claim that a 90-MHz Pentium will display between 24 and 30 fps when playing MPEG-1 video in software, but that's optimistic. My loaded 100-MHz Pentium MPC (which has 16 MB of RAM, a 4X CD-ROM player, and a fast graphics card) can do about 25 fps tops. And if you're doing anything else while running MPEG-1 video—whether it's playing video as part of a game, or running a word processor—your frame rate will surely plummet.

Video enthusiasts will find fault with even the best MPEG-1 setup, of course. Clips can be rife with artifacts, and the codec really can't keep up in high-action sequences, which limit its ability to parcel out bits economically. In addition, MPEG-1's 352 x 240-pixel resolution is too low to reproduce fine detail, though this is less of an issue on a 15- or 17-inch PC monitor than it is on a 35-inch TV set. Still, MPEG-1 is the best you can do today without spending a lot of money.

If you don't have a fast Pentium and aren't planning to upgrade to one, you can investigate a separate MPEG-1 playback board, which should cost about \$200 from a company such as Sigma Designs. These boards plug into a standard ISA slot inside your PC and hook into your graphics card by way of a feature connector or VGA loopback connector. Unfortunately, many boards either don't have a feature connector or users discover incompatibilities and performance problems that make this solution unworkable. The VGA-loopback option generally works better, taking the analog output of your graphics card into the MPEG-1 board, though this approach usually turns out to have limitations of its own.

The best solution, perhaps, is to buy a new graphics board that combines standard *Windows* acceleration and MPEG-1 playback hardware. Diamond Multimedia's *Stealth 2001* series and STB's *Powergraph Video 64* graphics boards cost less than \$250 and accept a \$99 MPEG-1 module. The best part of this particular approach is that all of the MPEG-1 decompression happens on the board, which means you get true 30-fps playback no matter what else your system is doing.

Note that there are alternatives to MPEG-1. Intel has announced an Indeo Video Interactive codec, which the company says will challenge MPEG-1 quality and data rates while adding quick file access for better interactivity in games and titles. And about a year down the road, the digital videodisc being developed by Philips, Sony, and Toshiba, which promises to revolutionize movie playback in your living room, will bring higher quality MPEG-2 video to MPCs—though it's important to note that MPEG-2 employs data rates beyond the range of current CD-ROM players. For now, though, MPEG-1 video is the best game in town.

—Michael Desmond

Plug In...

To The Toshiba Home Theater Seminar.

Presented In Conjunction With Video Magazine

If You Want The Home Theater Experience, You Need Some Home Theater Experience.

Toshiba is hitting the road with one of the most exciting educational programs ever. Toshiba Home Theater Seminars will guide you through every aspect of selecting, purchasing and setting up a Home Theater System. Free gifts and refreshments will be offered to all participants, plus the chance to win exciting prizes.

"Buying and Expanding Your Home Theater Setup" (10:00 AM - 1:00 PM)

The ultimate home theater seminar. Industry experts will take you through the essentials of audio and video technology, with special emphasis on making the right choices in selecting and using today's sophisticated home theater components.

Course Tuition is \$15

All Seminars Take Place on Saturday Mornings

Date	Location	Retailer
October 21	Denver	The Big Picture
October 28	Nationwide	Various
November 4	Houston	Videoland
November 11	Omaha	Nebraska Furniture Mart

October 28: Special Nationwide Seminar Via Satellite Uplink To Over 200 Store Locations. Call 1-800-709-4400 For Details.

Call 1-800-709-4400

For Exact Seminar Location And Registration Information

Seminars Will Resume In January.

Call 1-800-709-4400
or Check Stereo Review For 1996 Schedule.



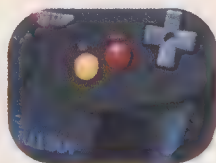
GATEWAY 2000's P5-133XL (\$4,399) is the first MPC to be supplied with a three-disc CD-ROM changer. The 4x changer is capable of playing standard CD-ROMs, music CDs, and Photo CDs. The P5-133XL

employs a 133-MHz Pentium processor, 16 MB of EDO RAM, a 256K cache, a 3.5-inch 1.44-MB diskette

drive, and a 1.6-GB hard drive. Graphics and text are displayed on Gateway's 17-inch Vivitron monitor, which is bolstered by an ATI Mach 64 video card with 2 MB of VRAM. Stereo sound is provided via a 16-bit Wavetable sound card and Altec Lansing ACS-31 speakers. A 28.8-kbps fax/modem, a mouse, and a keyboard are supplied. Circle 135 on reader service card



PC ACCESSORIES have taken their first step into the world of *Windows 95* by introducing the P20035 *Windows 95*-compatible keyboard (\$90). Equipped with two special "flying windows" keys, the P20035 is said to simplify the process of toggling between programs and/or different windows. A third "flying windows" key can be used to launch the Task Manager, facilitating better file management. The keyboard is FCC Class B-, UL-, and CSA-approved. Circle 136 on reader service card



SHORTWARE

Boy Toy Nintendo Virtual Boy 3-D Game System

THIS FALL, THE MAIN EVENT IN THE videogame business is Sega's Saturn versus Sony's PlayStation in a battle for 32-bit supremacy. That thought must have nettled Nintendo when they realized they wouldn't be able to deliver Ultra 64, the 64-bit system they're developing with Silicon Graphics, in time to join the fray; at this point, it isn't expected until next April. So the videogame giant opted for diversionary tactics, deploying a unique—okay, *odd*—tabletop game system called Virtual Boy.

Resembling one of those ambulatory "droids" from *Star Wars* and decked out in Porsche red, Virtual Boy (\$179) is a 32-bit game system that uses LEDs and a proprietary stereoscopic display technology to produce 3-D images. The idea is that you set the 13.3-inch-tall contraption on a flat surface such as a desk or tabletop, peer in at the images, and punch away at the supplied dual-grip control pad. Sounds pretty hip, right? And it is, but there's a catch: The 3-D images are monochrome, appearing in red against a black background.

That's not the bummer it might seem; I really got a kick out of Virtual Boy. To get into a game, you lean into the foam eyeshade at the Boy's front. This helps impart a feeling of immersion. Adjustments are on hand for focusing and for making the distance between the two display screens match the distance between your eyes. A volume dial as well as jacks for the control pad, headphones, and an optional GameLink cable are located on the Boy's bottom.

Under the hood, the Boy employs a 32-bit RISC processor running at 20 MHz, two high-resolution mirror-scan-

ning LED displays that create the 3-D effects, and a two-speaker stereo sound system. Six AA batteries provide the power; Nintendo says they'll have an AC adaptor for Virtual Boy by the end of the year.

Only four Boy-compatible games were available at presstime, though a number of third-party developers—including Ocean, which is developing a game based on the movie *Waterworld*—say they'll have titles for the system this year. One title, *Mario's Tennis*, is bundled with the system, while the other games—*Galactic Pinball*, *Teleroboxer*, and *Red Alarm*—cost \$40 each. The games come on ROM cartridges similar in size and appearance to Nintendo's Game Boy software.

So how does Virtual Boy stack up to the competition? That's a tough call, because there really isn't anything else like it. In some ways, it's extremely rudimentary: In the space-flight/fighter

**Suddenly,
a fighter named
Pagero punched
and then *slapped*
me senseless.**

Red Storm, for example, the ship, enemy craft, and various obstacles all appear as wire-frame images. And the action was relatively slow in both *Mario's Tennis* and *Galactic Pinball*, which suffers from slow flipper movement and relatively simple gameplay. But, despite these limitations, some of the games



were a blast. Once you get the hang of the flippers, *Galactic Pinball*'s four tables, hidden bumpers, and cool 3-D effects are seriously addicting. And the four camera perspectives, assorted powerups, and "bosses" that loom at the end of every stage more than made up for the limited graphics in the spaced-out *Red Alarm*.

My personal favorite was the futuristic boxing title *Teleroboxer*—in less time than it took Tyson to KO McNeeley, a fighter named Pagero not only punched—and then *slapped*—me senseless, but he ended the assault by "cracking" Virtual Boy's screen. Without getting into the gory details, I fared no better with the game's seven other robotic opponents.

Like any new game system, you really can't tell everything about Virtual Boy just by looking at its first few titles. It usually takes game developers a year to truly understand the hardware and then create games that utilize its potential. While the four games I played were a lot of fun and offered a bitload of convinc-

ing 3-D effects, the best is certainly yet to come.

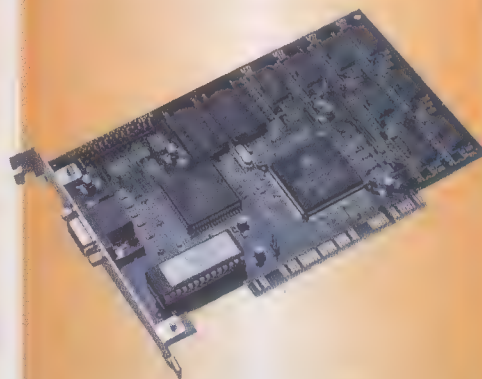
My only real complaint with Virtual Boy is its price. The system's freaky-deakiness means that it isn't an alternative to a 32-bit console like Saturn or

Nintendo Virtual Boy									
	1	2	3	4	5	6	7	8	9 10
COSMETICS									•
EASE OF USE									•
PERFORMANCE								•	
VALUE							•		
CIRCLE 137 ON READER SERVICE CARD									

PlayStation and, at \$179, it's too expensive for most of us to own as a second system. The Richie Riches of the world will eat it up, of course, but Nintendo will only have another winner on their hands if they can get the price under \$100 and back up Boy with a good library of 3-D games. —James K. Willcox



JBL's Multimedia Ensemble (\$599) brings the hallowed JBL name into the PC arena. The two-way speaker system is powered by a standalone 20-watt-per-channel amplifier. Each magnetically shielded speaker, which measures 14 x 4.4 x 6 inches (h/w/d), includes two 3.5-inch neodymium-magnet mid/woofers and a 0.75-inch composite-dome tweeter. Wall-mount brackets are supplied. *Circle 138 on reader service card*



ALARIS's Matinee (\$199) packs 64-bit graphics acceleration and scalable full-motion video capabilities into a single accelerator card. Powered by Alliance Semiconductor's ProMotion 6410 video/graphics accelerator chip and Xing's *MPEG Player Plus* playback software, Matinee supports all modern PC video formats (including *Video for Windows*, Indeo, Cinepak, and MPEG-1) and delivers full-screen playback speeds of up to 30 fps when used with a 90-MHz Pentium or faster processor. Xing's *MPEG Player Plus* includes an MPEG decoder and playback-application support for Video CDs. Four full-length Video CD features, including *Forrest Gump* and *The Hunt for Red October*, are bundled with the system. *Circle 139 on reader service card*



SOFTWARE

THE DAY AFTER TRINITY J. Robert Oppenheimer and the Atomic Bomb

AS ITS NAME IMPLIES, VOYAGER'S *The Day After Trinity: J. Robert Oppenheimer and the Atomic Bomb* (\$30) has both biographical and historical elements, and documentary director Jon Else has done a fine job of weaving them together, using the human element to bring a piece of history to life. We witness a genius who sees the bomb as an opportunity to make his mark in history, a hugely talented group of Nobel Laureate scientists, and a time in which the Nazis seemed to be preparing a nuclear holocaust as their finale. The disc—which includes interview transcripts, memos, FBI files on Oppenheimer, biographies of A-bomb principals, a photo gallery, and a search function—gives you the story . . . and the story behind the story. (Mac disc)

—Josef Krebs

MIRAGE

ATLANTIS INTERACTIVE'S *MIRAGE* (\$50) is part Western movie and part exploratory game—sort of like *Myst* on peyote. Your mission is to go into the Mirage Desert (a “hallucinogenic terrain,” according to AI, where everything is a doorway to another



Head case: *Mirage* muckraker

space-time continuum), locate missing-in-action Lt. Shooter of the U.S. Cavalry, and help him find his wife Jenny, who's been kidnapped by a renegade known only as the Marked One. On the way, you collect equipment, find

clues in the Lieutenant's diary, and—in *QuickTime* movies—meet a posse of desperados. What makes *Mirage* special is its design: It's tough to know what's “real,” and the surreal *QuickTime* doorways transport you from the desert to various interactive sites, including a bordello, jail, nightclub, and palatial European manor. *Mirage* has imagination to spare and encourages you to use your own. But watch out for the gunslingers—though they may just be in your head, they can send you to the graveyard. (MPC, Mac discs) —JK

EASTERN MIND

The Lost Soul of Tong Nou

EASTERN MIND (\$60) IS AN EXOTIC AND fascinating challenge that Sony Imagesoft has transplanted from Japan, where it's been a hit for the past year. The plot is straightforward in a loopy kind of way: You wake up one morning and realize that you've lost your soul. A passing white snake gives you one that'll last for 49 days, along with an amulet and a kerchief to carry it in, and packs you off to the island of Tong Nou, where (as everyone knows) lost souls can be found. The going only gets stranger from here. Beautifully animated—though very weird—characters abound, with obscure motivations if obvious intentions. You're certain to “die” several times early on, but in the world of *Eastern Mind*, dying is good; reincarnation is guaranteed, and it's accompanied by free gifts as well as transportation to the various lands you'll have to explore in order to find your soul. The going is both linear and nonlinear: Thinking logically will get you nowhere; your most powerful weapon in one land may be a bell or a flower, and guards are more likely to pose an impossible riddle than attack you. The animation and soundtrack are at once crude, captivating, and extremely addictive. *Eastern Mind* has been dubbed the Japanese *Myst*, and it does share some of the qualities of that long-running bestseller—but it adds interactivity and a very welcome sense of whimsy. Settle in for a long, pleasurable experience. (Mac disc)

—Pete Hisey

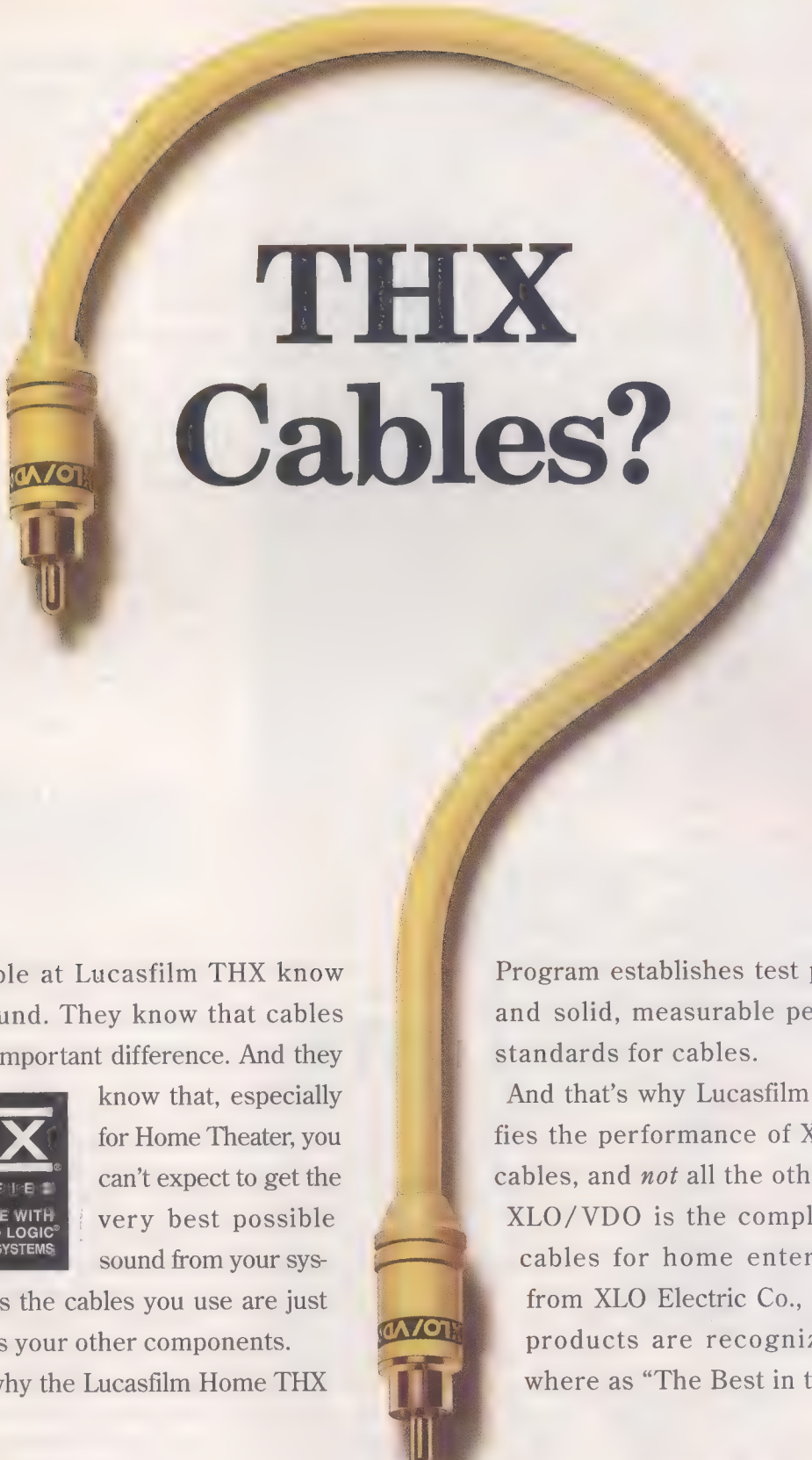
VIRTUAL POOL

INTERPLAY'S *VIRTUAL POOL* (\$50) MAY not be rock-and-roll, but at least it's rack-and-roll—and a lot of fun. All play is from the first-person perspective, with just the pool table, balls, and cue displayed—no animated characters or backgrounds are included, though parts of the pool hall can be seen when you zoom out for a full-table view. Four different games are on tap: Eight Ball, Nine Ball, Straight Pool, and Rotation. And an online option lets you play a real opponent via a network or modem; while the computer offers up a number of opponents of varying skill, head-to-head competition against another human being is really the only way to go. The best things about *Virtual Pool*, though, are the extremely accurate ball movement (a tracking feature lets you see the balls' trajectories before you make a shot) and the excellent sound effects, particularly the clack of balls hitting each other and then dropping into a pocket. While *Virtual Pool* doesn't break ground in terms of originality, it's far from being a scratch. Until someone figures out how to recreate the feel of felt and the ambience of a smoky pool hall, this is the closest you'll get to the real thing. (MPC disc)

—James K. Willcox

JEWELS OF THE ORACLE

IN *JEWELS OF THE ORACLE* (DISCS; \$70), your goal is to become a citizen of the ancient, enlightened city of Nisus. To realize it, you must prove your worthiness by demonstrating a high level of mind- and self-control: In secret chambers off the Well Room, you'll tackle a series of time-consuming puzzles, and there's no time limit set for their completion; rest assured that if your patience and reason aren't up to snuff upon entering, they certainly will be by the time you get through. *Jewels'* designers have painstakingly reproduced these puzzles, and have created a suitable environment in which to tackle them. The animation is inventive, the music is atmospheric, and the graphics are detailed. If you love puzzles (and have plenty of time on your hands), you'll want to hoard these *Jewels*. (MPC, Mac discs) —JK



THX Cables?

The people at Lucasfilm THX know about sound. They know that cables make an important difference. And they



know that, especially for Home Theater, you can't expect to get the very best possible sound from your sys-

tem unless the cables you use are just as good as your other components.

That's why the Lucasfilm Home THX

Program establishes test procedures and solid, measurable performance standards for cables.

And that's why Lucasfilm THX certifies the performance of XLO/VDO™ cables, and *not* all the others.

XLO/VDO is the complete line of cables for home entertainment™ from XLO Electric Co., Inc., whose products are recognized everywhere as "The Best in the World."

XLO/VDO™

XLO Electric Company, Inc. • 9480 Utica Avenue, Suite 612, Rancho Cucamonga, CA 91730 • Phone (909) 466-0382 • Fax (909) 466-3662

THX is a registered trademark of Lucasfilm LTD. Dolby and Pro Logic are registered trademarks of Dolby Laboratories Licensing Corporation. All rights reserved.

Ken Crane's LaserDisc SuperStore

Ken Crane's Is The Largest
Laser Disc Mail Order
Retailer In The U.S.

**We Stock
Every Title!**

- Fastest Availability On New Titles!
- Most Orders Shipped Same Day!
- 20% Discount On All Titles!
- Free 2nd Day Air UPS Shipping In The Continental U.S.A.
- Visa, Mastercard, Discover, AMEX, Checks, And C.O.D.
- \$1.50 Handling Charge Per Order Shipped.

**NOW SAVE
20%
OFF**

Suggested Retail On

- Every Pre-Ordered New Release
- Every Title In Stock
- Every Back-Order

**Includes FREE
2nd Day Air Shipping**

PHONE US AT...

1-800-624-3078

1-800-626-1768

1-714-892-8369

(Fax Number)

**For A Free Catalog
Write Or Visit
Our SuperStore**

Ken Crane's LaserDisc
15251 Beach Blvd.
Westminster, CA 92683

TALE

CONTINUED FROM PAGE 33

plugs into doubles as a Control-S edit-control jack (which isn't as good as Sony's CONTROL-L system, but it's better than nothing). Rapid-search speeds measured 7X at SP and 21X at EP (good, but not great, for this group); rewind time, however, was just a hair below the fastest, at 2:15.

Picture quality was excellent at SP, with practically no rainbow effects visible in the multiburst pattern and a minimum of noise in the yellow-field and color-bar patterns. Picture quality fell off at EP, however—the 740HF is clearly optimized for SP. Still frames were very solid at SP, with just a bit of head-switching noise visible at the bottom of the frame; things degraded a bit with EP, however.

TOSHIBA M-661

The M-661 (\$400) has a rather plain, boxy appearance. You won't find many extra convenience features, either—neither VCR Plus+ nor cable-box control make an appearance. Though the fastest search speeds are excellent (9X at SP, 27X at EP), as with GoldStar's GVR-E468 you have to press and hold the buttons to get them; otherwise you chug along at 5X (SP) or 7X (EP). There's also no pause button on the VCR itself—you've got to use the remote to pause a tape. (If you can have only one pause control, I suppose it's best to have it on the remote.) The remote itself is simple and well designed, though it seems larger than it needs to be. Unlike most of the models tested here, the M-661 has separate stop and eject buttons—this eliminates the possibility of, um, premature ejections. Rewind time was a solid 2:23.

In terms of performance, the M-661 was just plain excellent at both SP and EP. It exhibited absolutely no rainbow shimmering in any of the multiburst stripes at SP and just a hint in the 3-MHz stripes at EP—there's a very tight comb filter at work here. The color bars and yellow field were less noisy than with any model save Panasonic's PV-4562, and the difference was very slight and only observable at EP. Still frames were excellent at both SP and EP speeds. The M-661 also kicked out fine Hi-Fi audio.

THE BOTTOM LINE

Three VCRs emerged from the pack and vied for top honors—the **Panasonic** PV-4562, **Sony** SLV-740HF, and **Toshiba** M-661. Frankly, they're so close in terms of sheer performance that you could walk away with any of them and be extremely happy with your purchase. All three models, for example, had noticeably less picture noise than the other VCRs at SP speed, and all three had fine Hi-Fi audio sections.

Picking one of these three amigos would be tough. Panasonic's PV-4562 is the best overall in terms of video performance, with slightly better resolution than both the Sony and the Toshiba at SP and EP. It has very speedy rapid-search speeds, that handy thumbwheel-controlled menu system, and LP-recording capability. But its rewind time was very slow and it doesn't have cable-box control; the latter may be a major issue for cable subscribers.

Sony's SLV-740HF does offer cable-box control and a host of other features, and it's an excellent performer at SP—but performance falls off somewhat at EP. This may be a factor if a) you're going to use the VCR for taping, b) you'll be taping at EP, and c) you judge the Sony's EP falloff to be unacceptable. That's a lot of "ifs."

Toshiba's M-661 delivers the best audio of this trio and consistently fine video (with the exception of chroma PM noise), even if it's not quite up to the Panasonic's level. It also has very quick rapid-search speeds. Otherwise, however, it's very light on features.

Though the chart on pages 32 and 33 groups all of the other VCRs in a second tier, the **GoldStar** GVR-E468, **JVC** HR-VP624U, and **Samsung** VR8805 really occupy a middle tier in terms of sheer performance. In general, slight falloffs in color performance kept them out of the top tier. All three models have nice feature packages, and the JVC and Samsung have especially impressive audio sections (check out those gaudy dynamic-range figures!).

The other VCRs all had their strengths and weaknesses in terms of features and performance. Though just a few of the models performed unacceptably by our standards, you may feel otherwise—and that, of course, is entirely your call.

Also note that this test marks a turning point for GoldStar and Samsung, the two Korean manufacturers represented here. Their VCRs, traditionally

long on value but short on ultimate performance, have clearly ascended to the middle ground in terms of performance. They're still a great value, and they were the only models with true jog/shuttle controls.

OUR TEST SHOWS THAT EVEN A MOD-est cash outlay can buy a truly high-performance VCR that's packed with features, easy to use, and primed for use in a home-theater system. If you're looking to buy a VCR, we urge you—no matter what you're looking to spend—to carefully compare feature lists and take some time to judge performance. What you learn will help you purchase the VCR that's best for you. ■

For more information on any VCR reviewed in this story, please circle the appropriate number on this issue's reader service card: Fisher FVH-4914 (100), GoldStar GVR-E468 (101), Hitachi VT-F392A (102), JVC HR-VP624U (103), Optimus Model 59 (104), Panasonic PV-4562 (105), Samsung VR8805 (106), Sharp H942U (107), Sony SLV-740HF (108), Toshiba M-661 (109).

SURROUNDED

CONTINUED FROM PAGE 37

together, I truly felt more surrounded by sound, and the scene seemed appropriately busier, with the SCM-8s. With the 805s, the scene seemed more angular—almost as if most of the revelers were somewhere behind me.

IT'S STILL TOO EARLY TO DRAW HARD-and-fast conclusions about AC-3, of course, and that includes both the technology and/or manufacturers' initial systems. Note, too, that my evaluations have been performed with a very expensive AC-3/DPL processor—and that we may still have much to learn when more affordable AC-3 processors are rolled out over the next 6 to 12 months.

If I were buying surround speakers for an AC-3 system today, however, or were buying surrounds for a system that might someday include an AC-3 processor, I'd go with the best dipole surrounds I could afford. And if I was simply rolling in cash and had room to spare, I'd pair each one with a dedicated subwoofer; I'd position each dipole as I detailed earlier, and I'd place its sub directly be-

**THIS
FINGER
CAN HELP
YOU FIND
ANY ACCESSORY
YOU NEED.**

**JUST DIAL
800-231-0031**

Need to know something about electronic accessories? We have virtually everything for computers, cellular, telephones, audio, camcorders, car audio, antennas, video and video games, music cases, adapters and connectors.

Call us today. You've got nothing to lose and an awful lot to find!

**HAVEN
INDUSTRIES**

2950 Lake Emma Road, Lake Mary, FL 32746

© Copyright 1995 Recoton Corp., New York, NY 10022. All rights reserved.

**BOGEN
MANFROTTO**

3169 VIDEO TRIPOD

The 3169 combines Bogen 3001 Tripod Legs with a 3130 Fluid Head. It's easy to use and easy to handle. Made in Italy by Manfrotto, the Bogen 3001 Tripod is one of the lightest (about 3 lbs.) and smallest (folds to 20 1/2 in.), and one of the most versatile tripods we offer. Combined with the Bogen 3130 Head -- which features a Quick Release Plate that allows you to detach the camera with the flip of a lever -- and you have

the ideal set-up for Camcorders up to 8 lbs. Sturdy legs feature 3 click-stop spread angles and are made of tubular hard-finish aluminum and each has a sure-grip, quick-acting, non-fouling lever lock. Add the Portable Video Dolly and you have rock-solid support for smooth pans and tilts. See the Bogen 3169 Video Tripod at your dealer or contact: Bogen Photo Corp. 565 E. Crescent Ave. Ramsey, N.J. 07446 (201) 818-9500



bogen

We don't sell anything
we wouldn't buy ourselves.



and 20% off Other Top
LaserDisc titles...

PULP FICTION

STAR TREK

GENERATIONS

ROB ROY

While You Were Sleeping

CASPER

JUST CAUSE

The

SANTA

CINDERELLA

CLAUSE

Forrest

THE
LION KING

Gump

DISCLOSURE

OUTBREAK

INTERVIEW

LEGENDS

WITH THE

of the

VAMPIRE

FALL

True Lies

Mention this Ad and get a **20%** discount off the Suggested Retail Price on the Titles listed above. (Offer expires 1/31/1996)

Call for our **FREE** Monthly Laserdisc Catalog! Hundreds of New and Recent Releases. All, **at least**, **15% OFF S.R.P.!**

PLUS...

OVERNIGHT DELIVERY

Overnight Delivery Only \$3.75 per Order*!
1 or 100 discs - you pay only \$3.75! *Orders can include "Pre-orders" and "Back-orders!" (Continental U.S. shipments only - certain areas and shipments over 5-lbs. may require an extra business day)

Every Laserdisc title available at up to 40% OFF!



Laserdisc Fan Club, Inc.
1058 E. 230th St. (Source Cd. V115)
Carson, CA 90745

(800) 801-DISC(3472)

(mention Source Code: V115)

FAX (310) 952-3000

Open Monday - Saturday

For your **FREE** Laserdisc Catalog, please complete and mail the coupon below:
Name:

Address:

City, State, Zip Code:

neath it. Subs can always be added later, of course.

If you're thinking the whole discussion is moot because AC-3 is a long-shot, think again: Though AC-3 is currently relegated to laserdiscs, it's part of the HDTV standard, it's very likely to be incorporated in the digital videodiscs we should be seeing next year, and it may be included in digital satellite broadcasts in the near future. It also has Dolby's marketing muscle behind it, and that's no inconsiderable thing.

As good as AC-3 is, though, upon further reflection I've concluded that what we really need is a 7.1-channel digital surround-sound system. It would work just like AC-3... except that each dipole surround speaker would be fed *two* channels of information—one connected to each "half" of the dipole. This would enable the technicians who mix film soundtracks to drive either (or both) surround speakers as a monopole, a bipole, a dipole, or anything in between as each individual scene demanded. Strangely enough, Dolby isn't answering my calls. . . .

VIDEOTEST

Sony DCR-VX1000

CONTINUED FROM PAGE 85

handle makes it simple to add a video light or external microphone).

The audio package is topnotch. Audio is recorded as a 12-bit digital PCM stereo signal (there are *two* 12-bit stereo tracks); the cam is also equipped to play back 16-bit stereo audio. A four-capsule electret-condenser stereo microphone, audio digital signal processing (to minimize wind noise), and a headphone volume control round out the package. Audio performance was very good, with high dynamic range and even frequency response; some compression artifacts were audible, however, and the sound wasn't quite as smooth as an excellent analog recording.

The cam's digital nature has the potential for superlative editing with great versatility, accuracy, and, above all, freedom from generation loss. Digital signals don't deteriorate, and the DV format's error-correction system is designed to interpolate and restore data by sampling similar frames, "filling in the blanks" so no dropouts are visible.

Time code (hour/minute/second and frame) runs automatically, simplifying the process of identifying and locating scenes for editing. The VX1000 also offers the ability to implement content or on-screen lists of record dates and stills—though only with Sony-brand DV tapes, which have a 4-kb memory chip built into their cassette. A LANC jack allows you to connect the camcorder to editing gear, and there are also perks like two-speed edit search.

The VX1000 isn't laden with gimmicky special effects, but it does offer a fade function (to or from black). You can also program an overlap transition, which dissolves from a grabbed "still" to a live image. The PHOTO mode that's part of the DV standard produces 6-second-long jitter-free stills; adaptive frame-interpolation technology freezes and steadies these high-quality frames. The stills add variety to full-motion material; they also simplify the process of finding images for a video printer. You can shoot single frames or do time-lapse/interval recording.

Picture performance was *spectacular*. There were over 500 lines of horizontal (camera) resolution, and technical editor Lance Braithwaite was astounded by the absence of picture jitter. It's clearly the best picture we've seen in a consumer-grade camcorder and a substantial improvement over Sony's previous best, the VX3.

DIGITAL RECORDING IS NOT JUST A NEW feature—it's a major step forward in the evolution of videography. Though DV may only be a high-end way-station on the road to disc- or silicon-based camcorders, it's a sweet place to be for the next 5 or 10 years. And Sony's DCR-VX1000 (and their single-CCD DCR-VX700, \$2,999) joins Panasonic's three-CCD PV-DV1000 (price not available at presstime) as the first DV camcorders you can buy.

In addition to being extremely easy to operate and having a heady combination of important features, the VX1000 offers something no other cam—except, perhaps, the two models mentioned above—can: The best, most stable picture that can be captured by a consumer camcorder. You also get better audio, more versatile manual controls, faster automatic functions, and just plain smoother shooting. It's a thrilling introduction to a new technology. And though the VX1000 is extremely expensive, I still think it's a terrific value. ■

"Joe Kane Says Your TV Picture Is All Wrong. And He's Right."

— Video Magazine, October 1994

Buy your Home Theater from an ISF dealer & your TV will be set up for great pictures and High Fidelity Video*

Don't blame the manufacturers. They have no choice. The lighting in mass market stores that retail most of the 25 million TV sets sold yearly is very different from the lighting in your home. Televisions are set up to look good in the harsh light of a store. ISF dealers adjust your set to look its best in the lighting in your home. Sorry, you just can't get a great picture in broad daylight. Home Theater done right requires a little light control.



*High Fidelity Video is the mix of the art of the cinematographer and the science of reproducing it on a properly calibrated television. Your TV must not make movies brighter, bluer, or in any way different from the artist's vision. ISF trains dealers to calibrate your television on delivery to accurately reproduce the incoming signal. Proper setting of color, tint, contrast, brightness, sharpness and color temperature can be yours if you choose one of these dealers.

Absolute Sound, Inc.

Winter Park, FL
(407) 629-0230

Ambrosia Audio & Video

Bel Air, CA
(310) 440-5522

Architectural Electronicssm

Houston, TX
(713) 465-6333

Audio & Video Specialists, Inc.

Birmingham, AL
(205) 871-6328

Audio Images

Orange, CA
(714) 538-4608

AudioVideo Insight

Dearborn Heights, MI
(800) 272-4411

Babbage & Sons Premium Entertainment Systems

Allen Park, MI
(313) 386-3909

BBC Sales & Service

Chesterton, IN
(219) 926-6435

Better Sound, Inc.

Boca Raton, FL
(407) 338-8898

Brock Audio, Inc.

Beaumont, TX
(409) 832-0276

Busch Home Theater

Santa Rosa, CA
(707) 573-9170

Dallas Sight & Sound, Inc.

Dallas, TX
(214) 392-3202

Definitive Audio

Seattle, WA
(206) 746-3188

Dream Systems, Inc.

Indianapolis, IN
(317) 872-7307

Electromedia Design, Inc.

East Hanover, NJ
(800) 400-0120

Electronic Home Consultants, Inc.

Miami, FL
(305) 229-5177

Evolution Audio & Video

Agoura Hills, CA
(818) 879-1312

Future Home

Beverly Hills, CA
(310) 274-9393

Home Theatre Design Group

Van Nuys, CA
(818) 609-6426

HomeTech

Santa Rosa, CA
(707) 542-1510

HomeTronics

Dallas, TX
(214) 490-1090

Horizon Install Group, Inc.

Studio City, CA
(818) 752-4322

Jim Doolittle

Hanover, MA
(617) 826-1619

Orchestral Arts, inc.

Toronto, Canada
(416) 469-4478

Pat Bradley's Video Calibrations

Eagan, MN
(612) 894-3161

Perfect Vision Tuneup

Rockville, MD
(301) 340-6120

Performance Imaging

White Plains, NY
(914) 997-1831

Picture Perfect

Atlanta, GA
(404) 252-8308

Precision Audio/Video

Moorpark, CA
(805) 523-3005

Projection Systems, Inc.

Foster City, CA
(415) 461-3553

Savant Audio

Princeton Junction, NJ
(609) 799-9664

Sound & Vision

Home Entertainment
Orland Park, IL
(708) 403-2500

Sound by Singer, Ltd.

New York, NY
(212) 924-8600

Sound Productions

Carmel, IN
(317) 844-1103

TABCOM, Inc.

Rocky River, OH
(216) 331-7511

The Listening Room, Inc.

Scarsdale, NY
(914) 472-4558

The Sound Environment, Inc.

Omaha, NE
(402) 391-3842

Theater Master

Rochester, NY
(716) 454-1460

Total Media Systems

Farmingdale, NY
(516) 777-7058

TRM TeleFilm

West Hollywood, CA
(213) 655-8860

Tru-Line Video Technologies

Van Nuys, CA
(818) 994-0696

Vern's Electronics

Boca Raton, FL
(407) 997-9444

Woodbridge

Stereo/Video
Woodbridge, NJ
(908) 636-7777

Joe Kane

welcomes the first two licensed ISF manufacturers:

**Da-Lite Screen Company, Inc. and
Stewart Filmscreen Corporation®**

ImagingScience

F O U N D A T I O N , I N C

ISF Phone 407/997-9073 • The Imaging Science Foundation is produced by Joel Silver

CIRCLE NO. 81 ON READER SERVICE CARD

SHARP

Back to the Future

Order Hotline

1-800-477-1003

AMERICA'S CHOICE 4 GREAT VIEWCAM MODELS



VL-E37U 8MM VIEWCAM™ with 3" Color LCD View Screen, 270° Variable Angle Recording, 180° Recording Message Instruction On-Screen Display and Block Shot Recording. Low Reflectivity LCD (1%) for Outdoor use. Instant Playback with sound. Built-In Speaker with volume control. Infrared Remote Control. Built in Stand.



VL-E47U 8MM VIEWCAM™ with 4" Color LCD View Screen, 270° Variable Angle Recording, 180° Recording Message Instruction On-Screen Display and Block Shot Recording Power Saving LCD OFF Function. External Recording. Built-In Speaker with volume control. Infrared Remote Control. Built in Stand.



VL-H420U Hi-8MM VIEWCAM™ with 4" Color LCD View Screen, Digital Image Stabilization (D.I.S.), 20x Digital Zoom. Hi-Fi Stereo. Low Reflectivity LCD (1%) for Outdoor use. Digital STILL/SNAP/STROBE Function. Instant Playback with sound. Built-In Speaker with volume control. Infrared Remote Control. Built in Stand.

Receive up to \$200.00 rebate with your purchase!



VL-H450U Hi-8MM VIEWCAM™ with 4" Color LCD View Screen, Viewcamport, Digital Image Stabilization (D.I.S.), 20x Digital Zoom. Neuro Auto Exposure. Digital Full Range Auto Focus. Built-In Speaker with volume control. Infrared Remote Control. Built in Stand. Noiseless Still and Slow Motion.

CAMERA + sound

1104 Chestnut Street • Philadelphia, PA 19107

Call Toll Free 1-800-477-1003

Available from Sharp's
World's Largest
Independent Viewcam Dealer

MULTI MEDIA

VR-MS1U The Viewcamteleport™ enables transmission of full-color still video images over ordinary telephone lines. Easily, conveniently, immediately.

GZ-P15U Ultra-Thin, Lightweight Color Video Printer with Wired Remote Control produces photo-quality prints on a wide variety of papers and textile transfers.

RETURNS MAY BE SUBJECT TO A 10% RESTOCKING FEE. SHIPPING AND HANDLING CHARGES ARE NON-REFUNDABLE. WE ARE NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS. CALL TOLL FREE 1-800-477-1003. ALLOW 2 - 6 WEEKS FOR BACK ORDERS.

CIRCLE NO. 36 ON READER SERVICE CARD

Home Theatre Speaker System

JBL

Music 1

This four-piece system consists of a pair of 2-way loudspeaker satellites, two passive subwoofers and speaker wire.

Movie 1



Ideal for upgrading Music 1 for home cinema application, this system includes a pair of Surrounds and a Sat 1 for the center channel. Movies 1 added to Music 1 becomes a 7-piece home cinema system.

MUSIC 2 AND MOVIE 2 NOT SHOWN
PLEASE CALL FOR DETAILS

CALL TODAY for our Free catalog
with over 50 pages of Video,
Audio, and Computer Equipment.

THIS MONTH'S SPECIALS!

Canon **NEW!** **Hi8**
ES-2000

- 20X zoom lens, color view finder
- AF/AE system give you total control over the images you shoot

Optical Image Stabilization!

Panasonic **VHS**
PV-1Q505

"Works with Your VCR"

20 x ZOOM

Image Stabilization & Color Viewfinder!

Hi-Fi Equipment & Laser Disc Players

JVC

NEW '95 MODELS!

Cassette Decks

TD-V661TN

TD-W717TN

TD-W317TN

A/V Receivers

RX-517TN

RX-717TN

RX-817TN

CD Players

XL-M215TN

XL-M317TN

XL-M417TN

Mini Systems

MXC200

MXC220

MXC330

100 Disc CD Changer
XM-D1
Mini Disc/Record
Play

Panasonic

Laser Disc Players



PIONEER

Laser-Karaoke



SUPER VHS SPECIALS!

Over 400 Lines of Resolution

JVC **HR-S7200** **FREE MOVIES**

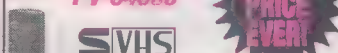


JVC's newest release!

S-VHS 4 head Hi Fi with jog shuttleCALL!

Panasonic **LOWEST PRICE EVER!**

PV-S4586



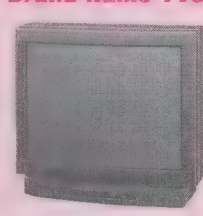
Shuttle control/VCR Plus+/Front-mounted A/V input

Panasonic Digital A/V mixer



WJ-AVE 7

Brand Name TVs!



13"-35" - CALL!

AUTHORIZED DEALER

SIMON SONY JVC
TOSHIBA
VIDEONICS **GO.VIDEO**
RECOTON **Panasonic**
Canon **JBL** **PHILIPS**

Camcorders Starting At! SAVE 20-30%



Available for most camcorders!

VHS VHS

NEW!



AB-1

Edit Suite is a technological breakthrough in A/V roll editing.

PROFESSIONAL & DESKTOP VIDEO

Panasonic

INDUSTRIAL CAMCORDERS

AG-456 12X zoom

AG-3 3 chip/SVHS

EDITING DECKS

AG-1280 4 head

AG-1970 w/ 2 line TBC

AGA96 controller

MONITORS

CT-1383Y 13" video monitor

CT-1384VY 13" w/ tuner

CT-2084Y 20" video monitor

CT-2084VY 20" w/ tuner

A/V MIXERS

WJ-MX30 digital field synch.

VIDEONICS

MX-1 digital mixer
TM-2000 TitleMaker 2000
VE-1 Video Equalizer
TU-1 Thumbs Up
SE-1 Special Effects Mixer
AB-1 A/B Roll Controller

SONY

Authorized Dealer

MONITORS
GVM 1311Q NTSC/PAL/RGB
GVM 2020 20" Multi scan

SONY

Authorized Dealer

EDITING DECKS

EVO-9500 Hi8 record/play

EVO-9650 Single frame Hi 8 deck

EVO-9720 Hi8 dual deck

EVO-9800 Hi 8 recorder/player

SVO-9600 SVHS VCR only

SVP-9000 SVHS play only

LASER DISC PLAYERS

MDP-1150 laser bar code

SONY

Provides VISCA compatibility

•Records or dubs (RC) time code

•Can record PCM digital audio •Available in Hi-8 and 9mm

•Provides the key to integrating video cameras, recorders, and display devices into the personal computer environment

V Deck



V Box



FutureVideo

A/B ROLL EDIT CONTROL SYSTEM

•V-STATION™

Desktop inter-format A/B Roll edit controller with RS-232C port, 3 programmable GPI triggers. Reads Hi8 RC time. Available for Windows, DOS / Mac & Amiga. 3 cables included.

PRO MARK II - Automatic Inter Format

2 cables included.

Canon
ES2000CALL
ES800Image stable

LENMAR
NO MEM™ BATTERY Fully Sony Compatible!

TOSHIBA
VCR's
M-650 4 head Hi-Fi
M-659 VCR Plus C 3
M-680 Hi-Fi / VCR Plus
M-760 6 video heads

FAMBUCCO
ACCESSORIES
VO990 Lens guard kit 52.49.46mm
VO690 Lens guard kit 37.34.30.5mm

AZDEN
MICROPHONE
WMS-PRO 2mic system
WHX-PRO hand held

SIMO
SPM-E Universal car cord
SPM-3 Charger / reconditioner
SRW-81 8mm rewinder
SFX-L Control L editor
SFX-4 Special effect / sound mixer

JVC

CAMCORDERS

GR-SZ90 Super VHS/FREE NEW!

GR-AX700 NEW!

GR-AX800 NEW!

GR-AX900 NEW!

GR-SV3 w/LCD monitor

JVC VCR's

HR-J620U 4 head Hi Fi

HR-J616U jog shuttle/audio dub

HR-VP624U shuttle control

HR-VP628U VCR Plus/jog

HR-VP720U New New New

Panasonic

CAMCORDERS, C-FORMAT

PV-1Q205 14:1 200m

PV-1Q305 Color viewfinder

PV-1Q405 Image stabilization

PV-1Q505 As above w/ color VF

PV-S64 Super VHS

FULL SIZE

PV-940 w/FREE case

PV-950 Color viewfinder

PV-9770 Super VHS

TV/VCR COMBO

PV-M1324 13" combo

PV-M1345 13" w/4Head VCR

PV-M1355 As above - white

PV-M2044 20" combo

PV-M2055 20" w/Hi Fi VCR

Panasonic

ACCESSORIES

W JAVE5 A/V Mixer

W JAVE7 NEW

WJTTL7 Titler

VCR's

PV-4514 4Head VCR Plus+

PV-4551 4Head Hi Fi

PV-4561 As above w/ VCR Plus+

PV-4562 Dynamorphous heads

PV-4564 4Head Hi Fi jog/shuttle

PV-S4386 Super VHS - LOW PRICE!

PV-S4566 NEW! NEW!

PV-S4580 NEW! NEW!

LASER DISC PLAYERS

LX-H170 CALL

LX-H670 CALL

LX-900 CALL

All camcorders shipped: **UPS 2ND DAY AIR**
P.O. Box 17882
Milwaukee, Wisconsin 53217

One of Wisconsin's Top 10 Woman Owned Businesses
Corporate, Government & School POs Welcome
Tech: (414) 357-8181 • No surcharge for credit cards
• No extra charge for insurance • No extra charge for delivery
• On VCR's and Camcorders! • Non defective merchandise returned for refund will be subject to a 15% restocking fee



Panasonic Demos & Returns

Camcorders (Delivered Prices)

PV-1Q 504 Image Stable \$699.95

PV-1Q 604 Color Viewfinder \$879.95

PV-S63 SVHS \$999.95

PV-54 Color Viewfinder/Image Stable \$999.95

Laser Disc

LX-600 \$399.95

FULL MANUFACTURER WARRANTY

SOLD BELOW COST!

VCR's (Delivered Prices)

PV-S 4380 - SVHS \$599.95

PV-S 4480 - SVHS \$649.95

PV-4414 - 4 Head \$299.95

K=416

Please reference this code when ordering by phone or fax.

Hrs (CST): M-F 8am - 8pm, Sat. 9am - 5pm • Tech Info 1pm - 5pm (414) 357-8181 • Fax (414) 357-8184

CIRCLE NO. 85 ON READER SERVICE CARD

DATA VISION

COMPUTER VIDEO

"Intelligent Superstore"

145 FIFTH AVENUE (3RD FL) NEW YORK, NY 10011

800-462-7466

OVERNIGHT DELIVERY GUARANTEED • 7 DAYS 8:30-10:00 PM

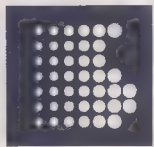
IN NY STATE 212-689-1111/24 HR FAX 212-689-1748

AUTHORIZED DEALER

SONY

AUTHORIZED DEALER

SONY



Authorized Dealer

AVAILABLE IN PAL

Video 8

Largest Selection Of:
Camcorders/VCR's
Editing/Industrial
TV's/Video Printers
AV Laser's/Diskman's
Telephones/Walkman's
Short Wave Radio/DAT
Computer Products

ESP AVAILABLE



HITACHI

VM-E510A

- 24X1 ZOOM
- 1 LUX
- EIS/MOTION SENSOR
- COLOR VIEW
- AKELINE BATT CAPABILITY



VMH-81A

- 24X1 ZOOM
- 1 LUX
- IMAGE STABILIZER
- COLOR VIEW
- HI-FI STEREO
- WIRELESS TV PLAYBACK OPTION



VMH-71A HI-8 ..CALL
VME-310A 8mm...CALL
VTS-772ACALL
VTF-482ACALL
VTF-382ACALL
VTF-494ACALL
VTF-392ACALL

VY170 PRINTER CALL
VME-410A 8mm CALL
VMH-38/39A HI-8CALL
VMH-710A HI-8mmCALL
VM-3700ACALL
VM-3800ACALL
VM2800ACALL

CALL

ALL HITACHI BIG SCREEN
TV'S IN STOCK...CALL

SONY

GV-S50

8mm Video Walkman
Hi-Fi Stereo
VCR Deck w/ TV Tuner
Still and Slow Motion
4" Active Color Screen
Built-in Speaker
Headphone Jack



KV-13VM20 13" TV/VCR Combo CALL
KV-20VM20 20" TV/VCR Combo CALL

SHARP

VLH-410U Hi 8

- 16X ZOOM
- 4" COLOR
- LCD SCREEN
- HI-FI STEREO

Docking Station



FULL SELECTION OF VIEWCAM
ACCESORIES IN STOCK

AUTHORIZED DEALER

VLE- 37 3"LCD COLOR SCREEN...CALL
VLE- 47 4"LCD COLOR SCREEN...CALL
VLH-420/450 4" HI-8.....CALL

JVC

GR-SZ9

- S-VHSC
- 120X
- STEREO
- COLOR VF

GRS7 ALSO
IN STOCK



AUTHORIZED DEALER

NEW GR-SZ7\$1088
NEW GRAX-800/900CALL
GRAX-700 COLORCALL
GRAX-350 COLOR.....CALL
HRS-7200 SVHS\$599
HRS-5200 S-VHS\$549
HRVP-710 JOG.....\$359

FAST

Video Machine Lite

- Δ Edit Controller for A/B, A/X roll and audio/video split editing
- Δ Controls any VCR with control L
- Δ 200 digital effects
- Δ 2 independent video channels
- Δ No Time Based Correctors needed

NEW MOVIE LINE.....\$969

MOVIE MACHINE PRO.....\$479

miroVIDEO DC1



\$599

- Δ Capture digital VHS video to your hard disk
- Δ Transitions, titles, and special effects
- Δ Print to tape in full-size NTSC or PAL
- Δ ADOBE PREMIERE WITH FLYING FONTS \$649
- Δ NEW DC1 PRO WITH MOUSE \$1099
- Δ NEW DC 20 NEW FOR '95 CALL



MOVIE
LINE

Desktop Video Editing
System For Windows

The video solution for
real-time capturing and
playback of video
sequences. Includes video
editing and photo
re-touching software

AUTHORIZED
DEALER

miroVIDEO VDC20

Desktop Video &

Windows Acceleration

- Δ Live television on your PC
- Δ Captures full size single frames
- Δ Full motion video
- Δ Cd playback

DESKTOP VIDEO

RADIUS

VIDEOVISION NUBUS..CALL

TRUEVISION

TARGA 2000 M CALL

TARGA 2000 D CALL

FUTURE VIDEO

V-STATION

2200 CALL

3300 CALL

EC-1000 SERIES

PROMK2 CALL

PRO/CT CALL

Panasonic

PVS-64 SVHS

- HI-FI STEREO
- STILL/STROBE
- 10:1 ZOOM
- COLOR VF

CALL

AVAILABLE IN PAL

PV-IQ505

- 14:1 POWER ZOOM
- EIS/COLOR VF
- 1 LUX

CALL

AUTHORIZED DEALER

PV-54 HI-FI STEREO\$829
PV-IQ604 COLOR VIEW\$699
PV-IQ505 NEW FOR '96\$649
PV-IQ305 NEW FOR '96\$499
PVD-705 VHS-C 410PIXELCALL
PV-940 VHS\$499
PV-S770 SVHSCALL

Canon

ES2000 CALL

- 20X OPTICAL ZOOM
- OPTICAL EIS
- CANON OPTICS
- FLEXIZONE AF/AE
- COLOR VIEW FINDER
- 64 ZONE AUTO WHITE
- 0 LUX

AUTHORIZED DEALER

ES800 CALL

- 12X ZOOM
- OPTICAL EIS
- CANON OPTICS
- 64 ZONE AUTO WHITE
- 0 LUX
- COLOR VF

ES600
12X/COLOR VIEW
FLEXIZONE AF/AE
BUILT-IN 0.65X WA
CALL

L-2 PRO HI-8.....CALL
ES1000 HI-8.....CALL
MOVIEBOY.....CALL
ES-550 8mm.....CALL
ES-80 8mm.....CALL

Canon



ES-70 8mm.....CALL
ED-100 EDITOR..CALL
RU-100
ADAPTER.....CALL

OPTICAL
SHAKE
ABSORBER
IMAGE STABILIZATION

ESP AVAILABLE

FULL SELECTION OF PAL/MULTISYS VCRS TVS AND CAMCORDERS

ALLER
MEDIA TECHNOLOGIES, INC.

AVER PRO

- DESKTOP VIDEO TITLING SYS
- SUPERIMPOSE TITLES, GRAPHICS AND TRANSITIONS OVER VIDEO
- 30 DIFFERENT WIPE PATTERNS

\$479

AVERKEY 3

- HIGH RES SCAN CONVERTER
- DISPLAY VGA OUTPUT FROM YOUR COMPUTER TO ANY TV OR VCR.
- PROVIDES VGA, COMPOSITE, SUPER VHS AND RGB OUTPUT
- RESOLUTIONS UP TO 800X600
- NO SOFTWARE DRIVER REQ.
- REMOTE ZOOM AND PAN WITH FREEZE

AVERKEY PC.....\$399
AVERKEY MAC/PC.....\$399



AVER VIDEO SUITE

- WINDOWS BASED EDITING SYS
- VIDEO EDITING, 2D & 3D TITLING
- SPECIAL EFFECTS
- CURTAIN CALL ... TITLES, FADES, WIPES
- SVHS / HI-8 COM. WITH 1 MG RAM

\$579

AUTHORIZED
DEALER

VISIT OUR NEW 15,000 SQ. FT. ONE-STOP SUPERSTORE LOCATED 445 5TH AVE NY, NEW YORK. (CORNER 39TH)
 FEATURING SONY EXHIBITIVE • VIDEO SHOWROOM • CELLULAR DEPT • DESKTOP VIDEO!

Panasonic

BROADCAST & TELEVISION

AG-456



**AG-DP800
SUPERCAM**
INDUSTRIAL
S-VHS
3-CCD DIGITAL
PROCESSING
CAMCORDER



WJ-AVE7
WITH 2 PIP



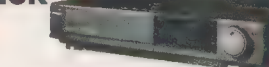
WJ-MX30

**AUTHORIZED
DEALER**



AG-1970

**S-VHS DECK
AVAILABLE
IN PAL**



AG-W1

**MULTI
SYSTEM**



WJ-MX50 DIGITAL MIXER.....CALL
 WD-5100H CAMERA.....CALL
 AG-195 CAMERA\$999
 AG-5700 EDITING VCRCALL
 CT-1384Y COLOR MONITOR.....\$299
 AG-EP60 COLOR PRINTER\$899

VIDEONICS



**MX-1
MIXER**



**TM-2000
TITLER**

AUTHORIZED DEALER



**NEW EDIT
SUITE AB-1**
AB ROLL EDIT
CONTROLLER

THUMBS UP....CALL
 BOING BOX....CALL
 EQUALIZER....CALL
**ALSO
AVAILABLE IN
PAL**

SONY

AUTHORIZED DEALER

XV-D1000

DIGITAL EFFECTS GENERATOR

- Digital Frame Synchronizer
- Double Frame Memory
- Digital Y/C Separation
- 77 Wipe Patterns
- Zoom, Mosaic, Multi-Pic., Strobe

CALL

XV-AL100

VIDEO EDITING SYSTEM

- All In One Style:
Edit Controller, Titler, Audio Mixer
- Auto Edit Programming
- RC Time Code
- Dual Mode Shuttle

CALL

RM-E1000T

EDITING CONTROLLER

- Controls Up To
3 Input Sources
- A/B Roll for Multiple Player Edit
- 8mm RC Time Code
- On Screen Menu
- 10 Page Digital Superimposer

RM-E700 EDIT CONTROLLER.....CALL

HOME THEATRE

LARGEST
SELECTION OF
TV'S/AUDIO
FROM SONY,
RCA, JVC,
HITACHI,
MITSUBISHI

AVAILABLE
FROM 2" TO
60" WIDE
SCREEN

COMPUTERS

AUTHORIZED DEALER

**IBM NEC
AST COMPAQ**

TOSHIBA

DESKTOPS-NOTEBOOKS
MULTIMEDIA-MEMORY
NETWORKING-ACCESSORY



JVC

JXSV55

- 16 WIPES/8 COLORS
- ENHANCER

AUTHORIZED DEALER

JXT-66

- S-VHS
- 7 LANGUAGES
- 4 SIZES

AVAILABLE IN PAL

JX-ED11

- WIRELESS EDITOR
- EDIT/ARRANGE
- S-VHS & HI-8

\$89

AUTHORIZED DEALER

JXT-88 VIDEO TITLER S-VHS\$189

Sima



\$49

SPM-4

TWINCHARGER



\$29

SPM-3

AC/DC CHARGER

SPM-7 RECONDITIONER\$17

SPM-1 • DC QUICKCHARGER..\$17

PRO EDIT 4

\$159

PRO EDIT 5

\$239



NEW FX-L

\$219

COLORWRITER

\$169



AVAILABLE IN PAL

SCREENWRITER\$79
 SED-COPYMASTER\$59
 PRO-EDIT3\$119
 PRO-EDIT2X\$129
 PC VIDEO EDIT.....\$59

GlideCam



**1000 PRO
STABILIZER
HOLDS ANY
CAMERA UP
TO 6LBS.**

\$169

STEADICAM

ALL
ACCESSORIES
IN STOCK

\$389

AVAILABLE
IN PAL
AUTHORIZED DEALER

SUNPAK

APT-200

\$139

CZ-200A.....\$69

RB-80UL

- 3 HOUR BATTERY
- LIFETIME WARRANTY
FOR ALL CAMERAS

\$49

AZDEN

WMSPRO

**WR2-PRO
SYSTEM**

\$349



\$149

WIRELESS MICS

WHX-PRO\$169
 WR2-PRO\$169
 WR2-PRO SYSTEM...\$349
 WMS-200\$79
 ECZ-990\$49

CITIZEN

M329 2.9"
COLOR MONITOR

\$149

AVAILABLE IN PAL

M938 3.9" MONITOR SYSTEM\$209

ALL CITIZEN ACCESSORIES IN STOCK.....CALL



Authorized Reseller



AND CLEANING KIT
WITH EVERY VIDEO
PURCHASE

VISIT OUR SUPERSTORE
445 5TH AVE. @ 39TH ST.
NY NY 10016

800-482-7466

FULL SELECTION OF CELLULAR PHONES AND ACCESSORIES IN STOCK

THE ELECTRONIC MAILBOX

THE VIDEO EDITING & PRODUCTION EXPERTS

WE KNOW OUR STUFF
staff of courteous, informative, sales professionals

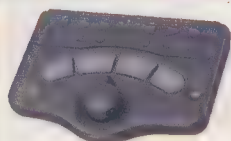
800-323-2325

10 DAY MONEY BACK 30 DAY
TRADE-IN GUARANTEE POLICY

10-12 Charles St, Glen Cove, NY 11542 FAX 516-671-3092 • TECH ADVICE HOTLINE 516-759-1943



JVC

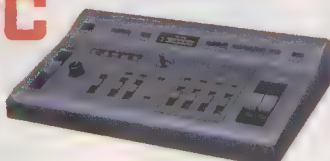


JXED-11
The World's Easiest Editor!
If you can press a button, you can edit a video! New JVC editor is completely wireless-IR remote controlled! Exclusive Jog Locator Dial helps locate & rearrange scenes. No hook-up. Edit anywhere, anytime! Works with all formats inc. S-VHS & Hi8. **\$99⁹⁵**



JXT66
Compact Video Titler
The lowest priced titler ever offered! Features 4 type sizes, 8 page memory, scroll and zoom in/out. Plus, it works with all formats including S-VHS! AC/DC

SALE \$99⁹⁵
(reg \$119⁹⁵)



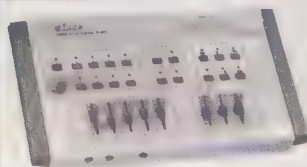
JXSV55
Ultimate S-VHS Production Center
Special Effects Generator - 16 wipe patterns & fade to 8 colors. High resolution Color Processor with joystick control. Video Enhancer for sharper images. Hi-Fi Stereo 3 channel audio mixer, 2 inputs/ 2 outputs plus switchable monitor out. Works with all formats, including SVHS/Hi8 **SALE \$399⁰⁰**



Remote Control A/V SVHS Switcher
3 SVHS/A/V in & out
Y/C separator Video amp with 800 lines resolution **\$249⁰⁰**



JXS700
Deluxe Remote Control SVHS Switcher
7 in. 4 out plus monitor out Y/C separator Video amp with 960 lines resolution 2 signal paths for simultaneous dubbing or viewing A/V processor loops **\$499⁰⁰**



DESKTOP VIDEO EDITING-without the computer!
DISSOLVES... A/B WIPE... CHROMA KEY... AND MORE

Studio style transitions & incredible special effects in one affordably priced, easy to use package! Built in Time Base Corrector (TBC) provides true dissolves and A/B wipes from one moving picture into another. Real Blue Screen Chroma Key superimposes onto moving background image. Hundreds of digital special effects including strobe, paint, color negative... & colorful wipes and fades! Stereo audio mixer. Works with all formats, incl. SVHS/Hi8. **\$599⁰⁰**

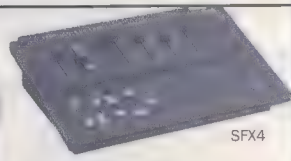


Automatic Control L Editor ■
Special Effects Generator

Automatically edits your videos w/color fades & wipes & audio mixing. Preprogram Edit Decision List w/ 23 scenes. On-screen display lists the in & out, transitions & elapsed time. Requires Sony or equiv. Control L camcorder. S-VHS/Hi8 compatible. **SALE \$199⁰⁰**
(reg \$249⁹⁵)



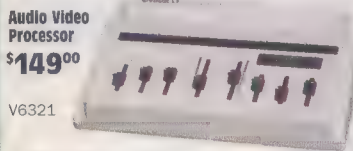
Color Titler w/ Special Title Effects
Put your titles into motion & create unique Hollywood effects. Full size keyboard, S-VHS & Hi8 compatibility, 12 page memory, 8 colors, 4 sizes, outlining & boxing. **SALE \$199⁰⁰**
(reg \$249⁹⁵)



Special Effects Editor & Sound Mixer
Complete creative editing center with color wipes, partial wipes, inverse, reverse, crossfades etc. Over 100 wipe patterns. Crossfades one input into next. Variable wipe & fade speed. Stereo sound mixer. 2 in / 2 out SVHS/Hi8 compatible. **Now \$199⁰⁰**



AMBICO V6350
Color Titler
SALE \$149⁰⁰
(reg. \$179⁹⁵)
Superimpose titles over live video or on B&W background. Features 8 colors, 2 fonts, 4 sizes & 3 borders. Titles can wipe in/out, scroll up/down, crawl & flash. 10 page memory.



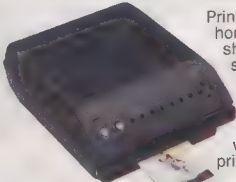
Audio Video Processor
\$149⁰⁰
V6321
Improves picture quality during playback or editing. Includes luminance, enhancer & color gain controls, DNR, 3 channel audio mixer with LEDs, & audio and video fade controls. Includes free headset/boom mic.



CASIO VM50
1.8" TFT Active Matrix LCD Video Monitor

For the sharpest, clearest LCD picture available today. Casio patented TFT active matrix technology provides a fantastic picture with phenomenal color quality & clarity. Includes monitor stand, sun resistant screen, A/V card & lens cap. **Sale \$188⁰⁰**
(reg. \$199⁰⁰)

Color Video Printer



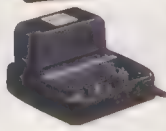
Print Images Right Off Your TV Screen!

Print beautiful, clear images from home movies, video tapes & TV shows. You can even make stickers, cards & posters of the video images! Take a photo of anything on screen, easily. Make a photo of a favorite scene from your party or wedding or make an album of prints from videos of the kids! **SALE \$499⁰⁰**
(reg \$599⁰⁰)



LENMAR
NOMEM™ BATTERY
NO MEMORY CAMCORDER BATTERIES

No memory batteries offer a full charge everytime! Carefree, no worry! Available for all major brands. **\$49⁹⁵**



"The Swiss Army Charger"
BCR262 Automatically reconditions & charges two 6v batteries, incl. NOMEM. Plus-4 level LED battery tester & Power Supply. AC/DC **\$79⁹⁵**

Also Available: BCR10 Charger/ Reconditioner for 9.6, 10, & 12v batteries, AC/DC **\$79⁹⁵**

LED65



NoMEM Camcorder Battery Belt Packs w/ LED
LED65 6.5AH Runs camcorder approx. 5 hrs. **\$69⁹⁵**
LED100 10AH Runs camcorder approx. 7 hrs. **\$99⁹⁵**
Also available: LP650 6.5AH 12v **\$69⁹⁵**

New!
SUNPAK
Memory Free

Nicad Battery with Lifetime Warranty
RB70UL High capacity (2000mAh) gives up to 2 hrs. for 8mm & VHS-C camcorders from Sony, Pana, JVC and Sharp. Features 3 stage LED indicators. **\$49⁹⁵**

Also Available: RB80UL-Same as above with ultra high capacity (2700 mAh) **\$69⁹⁵**

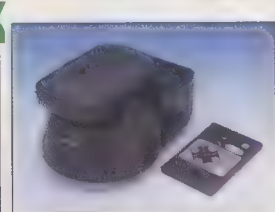
ATTENTION CANON OWNERS NEW RBE77MF High capacity (1700mAh) Memory Free Nicad for Canon camcorders. Slim design, Lifetime Warranty. **\$39⁹⁵**



RB-70UL



CZ-200A
Cordless VideoLight with Auto Sensor, Zoom & Tilt Head. Includes battery & charger **\$69⁹⁵**
RL-20 compact light **\$29⁹⁵**



Mount your camcorder on Sunpak's pan head, place on tripod & get in the action with everyone else! Infra-red signal controls pan & tilt plus lens zoom & record/pause of Sony, JVC, Hitachi & Canon camcorders. Powered by 6v battery (not included) **\$149⁰⁰**
RS200W Optional 20' remote sensor cord **\$24⁹⁵**

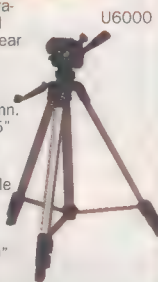
Remote Control Auto Pan/Tilt Head

AP-200W

SLIK

Includes ultra-smooth fluid pan head, gear drive & positive elevation center column. Opens to 55" **\$29⁹⁵**

Also available U8000 Deluxe model opens to 59" **\$49⁹⁵**



U6000

Shipping & handling charges are additional & non-refundable. Not responsible for typographical errors.

AverMedia DESK TOP VIDEO

Aver Video Editor



FAST

The Art of Digital Video.

Movie Machine Pro

Turn your PC into a state-of-the-art digital video mixer & titler for under \$500

18 A/B roll video effects, Chroma & Luma keying & more! Built in TV tuner. Framegrabber import titles & graphics from any Windows application & overlay them on video.



ON SALE

\$449⁰⁰

Movie Line Motion JPEG Bundle

AFFORDABLE...Non-Linear Editing on your hard drive

Using high-quality Motion-JPEG compression, this hybrid system gives you non-linear editing &/or real time digital effects. Bundle includes MM Pro, M-JPEG card plus Adobe Premier 4.0LE & Photoshop LE, Autodesk Animator Pro CD & Xing MPEG Conversion software.

Complete bundle only \$879⁰⁰

FPS60

SVHS Hi Resolution Non-Linear Editing System!

Turn your home PC into a state-of-the-art digital video production studio. Create commercials, highlight films, music videos and more! Video capture at up to 320x480, 30 frames & 60 fields per second. Integrated single board solution for super easy installation. Includes Adobe Premiere 4.0 LE & Photoshop LE, and Xing MPEG Encoder software.

Works with SVHS & Composite Systems

\$849⁰⁰

Fast Video Machine Lite A/B Roll Editing Suite w/ Edit Control and DVE Effects!!

Fully integrated system blows away higher priced component editing suites. Everything you need in one ISA card. Can be used for A/B roll, A/X roll & audio/video split editing. Supports LANC (Sony Control L), Control M (Pana 5 pin). The ultimate multi-source editing system, supports VITC, RCTC, Rapid, or CTL timecodes. Includes 2 integrated frame synchronizers and over 200 pre-programmed real time digital video mixing effects. Video processing adjusts contrast, brightness, & saturation.

SALE

\$2275

Multi I/O (RS232/422) *2750⁰⁰

including cables

DTV prices fluctuate. Call for current quote.

Quadrant Q Motion 100

Capture video at full-speed (60 fields/second) in full-screen



Curtain Call Titles

graphical timeline edit decision list • Create awesome titles and transitions using Curtain Call • Aver Video Editor superimposes your titles over the video footage automatically.

\$499⁰⁰

AverKey3 Hi-Resolution Scan Converter

Display VGA output from your computer to any TV or VCR! Provides VGA, composite, SVHS & RGB output with resolutions up to 800x600. True Plug & Play. Remote control operation lets you zoom & pan to any area of the screen, plus freeze. **Powerful presentation tool.**

AverKey PC **\$299⁰⁰**

AverKey Mac/PC **\$399⁰⁰**



Aver Video Suite Complete Windows based DTV editing system!

Our fully integrated bundle gives you video editing, 2D & 3D titling, plus special effects in one easy to use package. Custom modified VideoDirector 2.5 lets you edit from any Control L camcorder and modified Curtain Call lets you add titles, fades, wipes, graphics and animation with the click of the mouse. Aver Pro broadcast quality display card is SVHS/Hi8 compatible with 1MB RAM and flicker fixer.

SALE \$549⁹⁵



GOLD DISK VideoDirector

The Easiest Way To Make Your Own Videos

The #1 Home Video PC Editor



~~\$2⁹⁵~~ **COVER PRICE**

as little as 90¢ a copy!

YES!

Enter my subscription to VIDEO now!

- ☐ 1 year (10 issues) for \$9.97-\$1.00 a copy!
- ☐ 2 years (20 issues) for \$18.97-95¢ a copy!
- ☐ 3 years (30 issues) for \$26.97-90¢ a copy!

Name _____ (please print full name) BL3A

Address _____

City _____

State _____ Zip _____

CHECK ONE: ☐ Payment enclosed ☐ Bill me

Canadian orders add \$7.00 per year (includes 7% GST); foreign orders add \$7.00 per year; payment in U.S. funds must accompany order. Please allow 30 to 60 days for delivery of first issue.

Would you like to receive special offers from qualified users of our mailing list? ☐ Yes ☐ No

AZDEN



Use two wireless mics at the same time!

The Azden WR2PRO two channel receiver automatically mixes the sound from both mics. Let us design the perfect two mic system for your needs. Complete systems including WR2PRO & two wireless mics.

\$399⁰⁰ & up

WR2PRO receiver **\$189⁰⁰**

Mic Mixer

Record and mix sound from 3 sources, while shooting! Connect 2 mics plus background music to your camcorder's audio.



\$55⁰⁰ CAM3

WLXPRO

Professional VHF Wireless Mic System

250' Range

\$149⁰⁰



WHXPRO-Wireless Handheld VHF Pro Mic System **\$189⁰⁰**

ECZ 990 Picks up sound in

front without side noises. 2 position zoom/wide. **\$69⁹⁵**



111 PRODUCER SERIES VHF WIRELESS MICROPHONE SYSTEM



Delivers superior frequency response. Multiple channel operation - ten frequencies available. Features volume control & balanced/unbalanced output - interfaces with both video cameras & all sound systems. Flexible rubber mount & squelch/mute.

Specials

5 cables with gold tip ear, beautiful picture.

15) 6' **\$9⁹⁵** (reg. \$19.95)

sonic Owners:

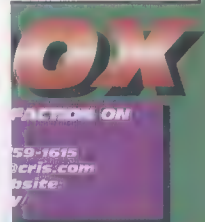
nic camcorder battery at price ever.

.3 Ah **\$49⁹⁵** (reg. \$49.95 ea)

PowerMax Pulse-Charge

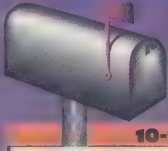
ditions & quick charges batteries in one cycle. t charge with built in surge protection! AC/DC

\$49⁹⁵



THE ELECTRONIC MAILBOX

THE VIDEO EDITING & PRODUCTION EXPERTS



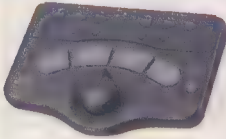
800-323-2325

WE KNOW OUR STUFF
staff of courteous, informative, sales professionals

**10 DAY MONEY BACK 30 DAY
TRADE-IN GUARANTEE POLICY**

10-12 Charles St, Glen Cove, NY 11542 FAX 516-671-3092 • TECH ADVICE HOTLINE 516-759-1943

JVC

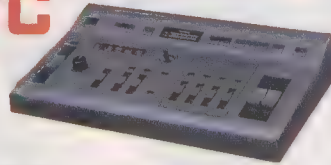


JXED-11
The World's Easiest Editor!
If you can press a button, you can edit a video! New JVC editor is completely wireless-IR remote controlled! Exclusive Jog Locator Dial helps locate & rearrange scenes. No hook-up. Edit anywhere, anytime! Works with all formats inc. S-VHS & Hi8. **\$99⁹⁵**



JXT66
Compact Video Titler
The lowest priced titler ever offered! Features 4 type sizes, 8 page memory, scroll and zoom in/out. Plus, it works with all formats including S-VHS! AC/DC

SALE \$99⁹⁵
(reg \$119⁰⁰)



JXSV55
Ultimate S-VHS Production Center
Special Effects Generator - 16 wipe patterns & fade to 8 colors. High resolution Color Processor with joystick control. Video Enhancer for sharper images. Hi-Fi Stereo 3 channel audio mixer. 2 inputs/ 2 outputs plus switchable monitor out. Works with all formats, including SVHS/Hi8 **SALE \$399⁰⁰**



Remote Control A/V SVHS Switcher
3 SVHS/A/V in & out
Y/C separator Video amp with 800 lines resolution **\$249⁰⁰**



JXS700
Deluxe Remote Control SVHS Switcher
7 in. 4 out plus monitor out Y/C separator Video amp with 960 lines resolution 2 signal paths for simultaneous dubbing or viewing A/V processor loops **\$499⁰⁰**



DESKTOP VIDEO EDITING-without the computer!
DISSOLVES... A/B WIPES... CHROMA KEY... AND MORE
Studio style transitions & incredible special effects in one affordably priced, easy to use package! Built in Time Base Corrector (TBC) provides true dissolves and A/B wipes from one moving picture into another. Real Blue Screen Chroma Key superimposes onto moving background image. Hundreds of digital special effects including strobe, paint, color negative... & colorful wipes and fades! Stereo audio mixer. Works with all formats, incl. SVHS/Hi8. **\$599⁰⁰**

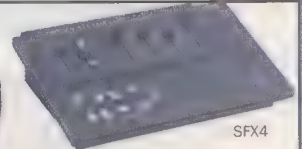


SFX-L
Automatic Control L Editor & Special Effects Generator

Automatically edits your videos w/color fades & wipes & audio mixing. Preprogram Edit Decision List w/ 23 scenes. On-screen display lists the in & out, transitions & elapsed time. Requires Sony or equiv. Control L camcorder. S-VHS/Hi8 compatible. **SALE \$199⁰⁰**
(reg \$249⁰⁰)



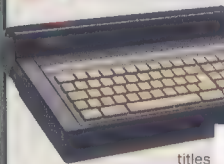
Color Titler w/ Special Title Effects
Put your titles into motion & create unique Hollywood effects. Full size keyboard, S-VHS & Hi8 compatibility, 12 page memory, 8 colors, 4 sizes, outlining & boxing. **SALE \$199⁰⁰**
(reg \$249⁰⁰)



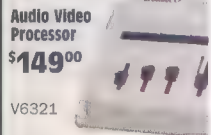
Special Effects Editor & Sound Mixer
Complete creative editing center with color wipes, partial wipes, inverse, reverse, crossfades etc. Over 100 wipe patterns. Crossfades one input into next. Variable wipe & fade speed. Stereo sound mixer. 2 in/ 2 out SVHS/Hi8 compatible. **Now \$199⁰⁰**

SAMBICO

V6350
Color Titler
SALE \$149⁰⁰
(reg. \$179⁰⁰)



titles
B&W background, F
fonts, 4 sizes & 3 borders. Ti
scroll up/down, crawl & flash



**Audio Video
Processor**
\$149⁰⁰

V6321

Improves picture quality during playback or editing. Inc enhancer & color gain control audio mixer with LEDs, & aud controls. Includes free heads!

CASIO

1.8" TFT Active Matrix LCD Video Monitor

For the sharpest, clearest LCD picture available today. Casio patented TFT active matrix technology provides a

VM50



LENMAR
NOMEM™ BATTERY
NO MEMORY CAMCORDER BATTERIES

No memory batteries offer a full charge everytime! Carefree, no worry! Available for all major brands. **\$49⁹⁵**

"The Swiss Army Charger"

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 483 MARION, OH

POSTAGE WILL BE PAID BY ADDRESSEE

VIDEO

P.O. BOX 1981
MARION, OH 43306-2081

New!
SUNPA
Memory Free

Nicad Battery with Lifetime Warranty
RB70UL High capacity (2000mAh) gives up to 2 for 8mm & VHS-C camcorder from Sony, Pana, JVC and Sharp. Features 3 stage LED indicators. **\$4**

Also Available: RB80UL-S as above with ultra high capacity (2700 mAh)

ATTENTION CANON!
High capacity (1700mAh) Canon camcorders. Slim

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

AverMedia DESK TOP VIDEO

Aver Video Editor



Gradations
Glows
Curtain Call Titles

The World's 1st Plug Play & Edit System!
Just plug into any computer, load the software and start editing! Here's what you can do: •Edit and arrange scenes from any Control L or IR camcorder •View your video on your VGA monitor •Capture Picons and make a graphical timeline edit decision list •Create awesome titles and transitions using Curtain Call •Aver Video Editor superimposes your titles over the video footage automatically.

\$499⁰⁰

AverKey3 Hi-Resolution Scan Converter

Display VGA output from your computer to any TV or VCR! Provides VGA, composite, SVHS & RGB output with resolutions up to 800x600. True Plug & Play. Remote control operation lets you zoom & pan to any area of the screen, plus freeze. **Powerful presentation tool.**

AverKey PC **\$299⁰⁰**

AverKey Mac/PC **\$399⁰⁰**



Aver Video Suite Complete Windows based DTV editing system!

Our fully integrated bundle gives you video editing, 2D & 3D titling, plus special effects in one easy to use package. Custom modified VideoDirector 2.5 lets you edit from any Control L camcorder and modified Curtain Call lets you add titles, fades, wipes, graphics and animation with the click of the mouse. Aver Pro broadcast quality display card is SVHS/Hi8 compatible with 1MB RAM and flicker fixer.

SALE \$549⁹⁵



GOLD DISK VideoDirector

The Easiest Way to Master Your Videos



Turns your PC, camcorder & VCR into a complete video editing system. Choose the shots, drag & drop into order & press "Make Tape" for automatic assembly. Available for PC or Mac.

\$99⁹⁵

The #1 Home Video PC Editor

Ulead Systems Mediastudio Pro 2.0 Advanced Non Linear Editing Software

Create full motion digital videos with one fully integrated program. Catalog, edit, add special effects filters, morph, and warp as well as combine video, animation still images, anti-aliased titling, and audio, all with point and click ease.

*(software only -requires video capture card)

Special: \$20 off Mediastudio Pro with any additional DTV purchase

SALE \$299⁹⁵



FAST The Art of Digital Video.

Movie Machine Pro

Turn your PC into a state-of-the-art digital video mixer & titler for under \$500

18 A/B roll video effects, Chroma & Luma keying & more! Built in TV tuner. Framegrabber import titles & graphics from any Windows application & overlay them on video.



ON SALE \$449⁰⁰

Movie Line Motion JPEG Bundle

AFFORDABLE...Non-Linear Editing on your hard drive
Using high-quality Motion-JPEG compression, this hybrid system gives you non-linear editing &/or real time digital effects. Bundle includes MM Pro, M-JPEG card plus Adobe Premier 4.0 LE & Photoshop LE, Autodesk Animator Pro CD & Xing MPEG Conversion software.

Complete bundle only \$879⁰⁰

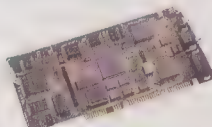
FPS60

SVHS Hi Resolution Non-Linear Editing System!

Turn your home PC into a state-of-the-art digital video production studio. Create commercials, highlight films, music videos and more! Video capture at up to 320x480, 30 frames & 60 fields per second. Integrated single board solution for super easy installation. Includes Adobe Premiere 4.0 LE & Photoshop LE, and Xing MPEG Encoder software.

Works with SVHS & Composite Systems

\$849⁰⁰



Fast Video Machine Lite A/B Roll Editing Suite w/ Edit Control and DVE Effects!!

Fully integrated system blows away higher priced component editing suites. Everything you need in one ISA card. Can be used for A/B roll, A/X roll & audio/video split editing. Supports LANC (Sony Control L), Control M (Pana 5 pin). The ultimate multi-source editing system, supports VITC, RCTC, Rapid, or CTL timecodes. Includes 2 integrated frame synchronizers and over 200 pre-programmed real time digital video mixing effects. Video processing adjusts contrast, brightness, & saturation. Create titles, logos & graphics in any Windows appl.

SALE \$2275

Multi I/O (RS232/422) **\$2750⁰⁰**

including cables



Quadrant Q Motion 100

Capture video at full-speed (60 fields/second) in full-screen resolutions (640x480) for under \$500!!

Capture, edit & output high-quality digital video at a low cost. Powerful bit-rate control & custom media stream bus lets you optimize the card to match your system & hard drive performance, guaranteeing high-quality results from any system. Incoming video can be displayed in real-time on an external monitor or TV via composite or SVHS output of card. May be displayed on computer monitor, at a reduced frame rate.

\$499⁰⁰



Q-Motion 150: Complete bundle including Adobe Premiere 4.0 LE & Photoshop LE & CeQuadrat PixelShrink MPEG Encoder software.

\$679⁰⁰



CARD CAM VIDEO IN

Now you can capture video with your Laptop or Notebook

computer! High quality still image & video capture card for PCMCIA Type II equipped computers! True color frame grabbing & video capture (15 Fps, 320x240 resolution), plus all the software you need to capture video to your harddrive!

NEW! \$379⁰⁰

AZDEN



Use two wireless mics at the same time! The Azden WR2PRO two channel receiver automatically mixes the sound from both mics. Let us design the perfect two mic system for your needs. Complete systems including WR2PRO & two wireless mics.

\$399⁰⁰ & up

WR2PRO receiver **\$189⁰⁰**

Mic Mixer

Record and mix sound from 3 sources, while shooting! Connect 2 mics plus background music to your camcorder's audio.



\$55⁰⁰ CAM3

WLXPRO

Professional VHF Wireless Mic System
250' Range

\$149⁰⁰



WHXPRO-Wireless

Handheld VHF Pro Mic System **\$189⁰⁰**

ECZ 990 Picks up sound in front without side noises. 2 position zoom/wide. **\$69⁹⁵**



111 PRODUCER SERIES VHF WIRELESS MICROPHONE SYSTEM



Delivers superior frequency response. Multiple channel operation - ten frequencies available. Features volume control & balanced/unbalanced output - interfaces with both video cameras & all sound systems. Flexible rubber antenna & squelch/mute

\$299⁰⁰ and up

Accessory Specials

Philips top quality SVHS cables with gold tip connectors insure a clear, beautiful picture.

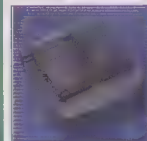
SALE! 3' \$7⁹⁵ (reg. \$14.95) 6' \$9⁹⁵ (reg. \$19.95)

Attention Panasonic Owners:

The most popular Panasonic camcorder battery at the lowest price ever.

BP88 2.3 Ah

NOW \$29⁹⁵ ea or 2 for \$49⁹⁵ (reg. \$49.95 ea)



SIMO PowerMax Pulse-Charge

Reconditions & quick charges two 6V batteries in one cycle. Fastest charge with built in overcharge protection! AC/DC

SPM10 **\$49⁹⁵**

THE ELECTRONIC MAILBOX

THE VIDEO EDITING & PRODUCTION EXPERTS

800-323-2325

30 DAY MONEY BACK SATISFACTION ON ALL DTV PURCHASES

FREE DTV Tech Support (516) 759-1615
Email Questions to: videoguy@cris.com
check Out our World Wide Website:
<http://www.cris.com/~videoguy/>



10-12 Charles St, Glen Cove, NY 11542 FAX 516-671-3092 • CODs Welcome

CIRCLE NO. 26 ON READER SERVICE CARD

One Call

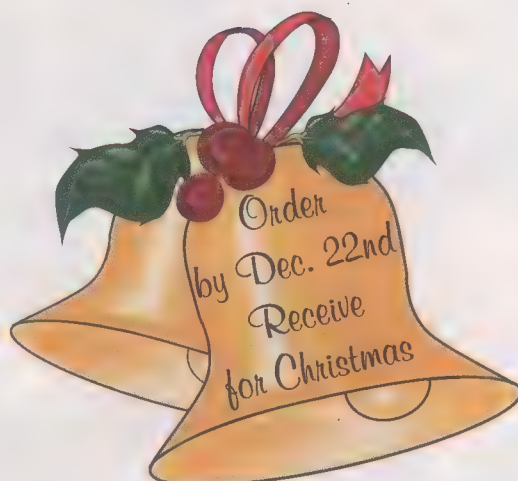


GETS IT ALL!

from the
'West'

AUDIO

AV Receivers
Separates
Speakers
CD's
Book Shelf
Car
Portable
AC3-THX
Pro Logic
Interconnects



VIDEO

DSS
Camcorders
VCR's
TV's
Home Theater
Projection
Laser
Videonics

PRICE ♦ DELIVERY ♦ SERVICE

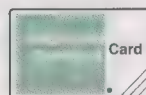
1-800-663-5255

FAX: (509) 838-4387

onecall@iea.com

www.onecall.com

**7 Days a Week - 7am to 6:30pm PST
418 W. Riverside - Spokane, WA 99201**



P.O.'s ACCEPTED

CIRCLE NO. 42 ON READER SERVICE CARD

SHOP WITH CONFIDENCE BECAUSE YOU HAVE A FRIEND IN THE FAMILY AT FAMILY PHOTO & VIDEO

Family Photo & Video

1-800-309-7468

BUSINESS HOURS
MON-THURS 9:30AM-10:30PM
FRI 9:30AM-6:30PM, SUN 10AM-7PM
& CLOSED SATURDAY

(We Accept All Major Credit Cards With No Surcharge!
COD orders accepted!)

INTERNATIONAL SHIPPING AVAILABLE! WE SHIP
OVERNIGHT BY REQUEST!

24 HOUR FAX HOTLINE
1-718-998-6650
CUSTOMER SERVICE LINE
1-800-405-7468
LOCAL NY LINE
1-718-645-1298



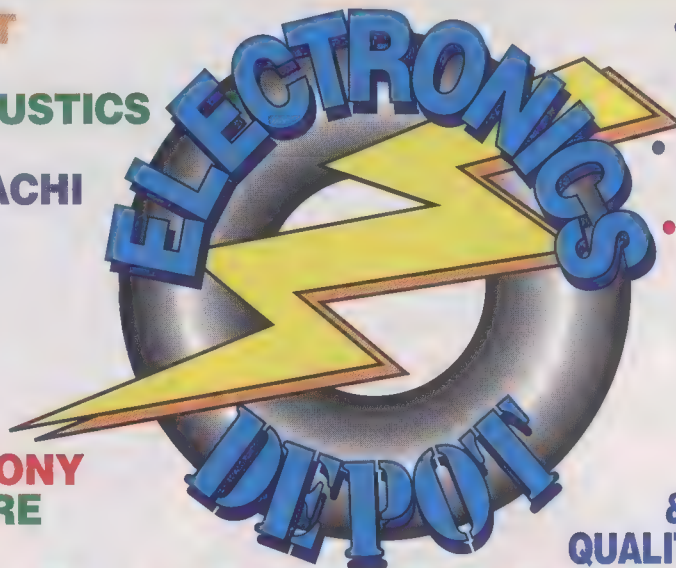
CALL FOR
OUR FREE
CATALOG!

At Family, we know how important your life is. From an important occasion like a wedding or a birthday, to something as casual as a day in the park, we know that every event is important to you. Whether you need a videocamera, VCR, or even home theater equipment, we can help you get what you need at the right price. Without being rude. Without being pushy. Buying electronics should not be a hassle. We at Family are here to help you get what you deserve - low pricing and courteous treatment!

SONY
Panasonic
JVC
Canon
RCA
SHARP
MITSUBISHI
PIONEER
The Art of Entertainment
BOSE
Technics
Nikon
MINOLTA
VIDEONICS
The Video Editing Company

CIRCLE NO. 35 ON READER SERVICE CARD

- ADS • ADVENT
- AIWA • BOSE
- BOSTON ACOUSTICS
- BAZOOKA
- DENON • HITACHI
- JBL • JVC
- KENWOOD
- MITSUBISHI
- NAD • NILES
- PANASONIC
- PIONEER
- SONANCE • SONY
- STRAIGHTWIRE
- YAMAHA



- ALTEC LANSING
- CELESTION
- CERWIN VEGA
- HARMAN KARDON
- KLIPSCH
- MONSTER CABLE
- PHILIPS
- RCA
- SHARP • TEAC
- TECHNICS
- SONY ES
- VELODYNE

& MANY OTHER HIGH QUALITY MANUFACTURERS

FREE SHIPPING

LOWEST PRICES... WE WILL BEAT ANY ADVERTISED PRICE! AND DON'T FORGET OUR 10 DAY MONEY BACK GUARANTEE.

1-800-500-1553



DENON AVR-3000

Denon's full featured pro logic receiver with 110 Watts across the front and 35 Watts to the rear channels. Optical Class A Circuitry and universal smart remote control.

\$899

Suggested Price \$1400

KENWOOD	KRV-7070 Pro Logic Receiver ...	329
SONY	STRD-965 Pro Logic Receiver ...	349
DENON	AVR-1500 Pro Logic Receiver ...	499
TECHNICS	SAGX-490 Pro Logic Receiver ...	249
YAMAHA	RXV-1070 Pro Logic Receiver ...	849



PIONEER CLDV-860

Pioneer's newest industrial grade Laser Karaoke Player features 1 bit DLC with pulse flow DAC, digital echo, one touch karaoke and remote.

BEST PRICE



YAMAHA CDC-655

Yamaha's 5 disc carousel remote changer with PRO-bit D/A Converter, synchro & random play and 20 track programming.

\$249

Suggested Price \$299

DENON	DCM-460 . 5 CD Changer	299
PHILIPS	CDC-926 . 5 CD Changer	199
YAMAHA	CDC-555 . 5 CD Changer	199
KENWOOD	DPM-5570 6+1 CD Changer	199
SONY	CDPC-745 5 CD Changer	319

Home Theater Experts

THX... PRO LOGIC... AC-3... SHARP VISION

HOURS

Monday thru Friday : 9AM-8PM

Saturday : 10AM-6PM

Sunday : 11AM-5PM East Coast Time

JVC GRAX-700U

JVC'S VHS-C Camcorder offers 12X Zoom, color viewfinder, programmable auto exposure with special effects and remote control.

\$599

Suggested Price..... \$699

14% OFF



SONY CCD-TR700 HI-8MM CAMCORDER

Sony's top of the line high 8 stereo camcorder offers 10x power zoom lens, steady shot, color viewfinder and remote.

\$1149

Suggested Price.. \$1399

18% OFF



CAMCORDERS

CANON ES-2000 TOP RATED	1199	PANASONIC PVQ-505 VHS-C	699
JVC GRAX-900U VHS-C	699	SONY CCD TRV-40 3" LCD 8MM	999
HITACHI VME-310U 8MM	699	SONY CCD TR83 8MM	799
PANASONIC PVQ-305 VHS-C	499		

SONY KP-53S55

Sony's 53" videoscope big screen T.V. has picture-in-picture, on-screen menus and multi language display.

\$1899

Suggested Price..... \$2500



SUPER SHIELDS AVAILABLE FOR ANY PROJECTION-IT PROTECTS SCREEN & IMPROVES PICTURE QUALITY

PANASONIC CT31SF12

This 31" stereo T.V. boasts one of the flattest picture tubes available in it's size.

\$799

Suggested Price.. \$999



RCA DSS DIGITAL SATELLITE SYSTEMS IN STOCK

\$100

REBATE



MITSUBISHI HSU-560

The Hsu-560 maintains the features and values of one of last year's top rated VCR's.

\$399

Suggested Price.. \$480

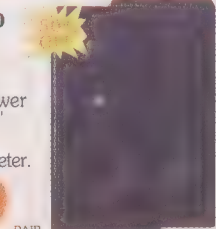
• MITSUBISHI • PANASONIC • JVC • SONY • HITACHI • RCA • ZENITH • SHARP VISION... FULL LINE IN STOCK

JBL LC-310

These 3 way floorstanding speakers handle 240 Watts of power and feature a 10" woofer and a titanium dome tweeter.

\$199

Suggested Price.. \$399



ADS	C-300is	Hi-End In Wall	249
ADVENT	Bookshelf	2 Way Bookshelf	69
CERWIN VEGA	VS-150	400W Floorstanding	499
JBL	CF-100	10" 3-Way Floorstanding ..	299
KLIPSCH	KV-3 C	Shielded Center Channel ..	349

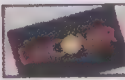
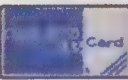
VELODYNE SUBWOOFERS NOW IN STOCK

Customer Service 201-912-8183

22 ROUTE 22 WEST SPRINGFIELD, NJ 07081

*UP TO 40 POUNDS IN THE CONTINENTAL USA - ALL

PRODUCTS ARE COVERED BY THE MANUFACTURER'S WARRANTY OR ELECTRONICS DEPOT'S EXCLUSIVE WARRANTY



ABE'S

SINCE 1979 CAMERAS AND ELECTRONICS OF MAINE

1957 CONEY ISLAND AVE, BROOKLYN, NY 11223

INTERNATIONALLY RENOWNED!

ORIGINALLY FROM OLD ORCHARD BEACH, MAINE

ORDERS AND INQUIRIES CAN NOW BE E-MAILED TO US AT: ABE@MAINE@aol.com

CALL TOLL FREE! IN NY & OUT OF STATE
1-800-528-2237



CALL FOR OUR FREE CATALOG!

PRICES VALID UNTIL END OF MONTHLY ISSUE

ASK ABOUT OVERNIGHT DELIVERY

TOLL FREE

CUSTOMER SERVICE LINE

For Inquiries on orders already placed and

Shipping information from 9:30am-5:00pm EST

1-800-992-2379

WE ALSO CARRY PAL!

OPEN SUNDAYS!

Monday-Thursday.....9:30am-10:30pm

Friday.....9:30am-4:00pm

Sunday.....10am-7pm

SATURDAY CLOSED!

LOCAL & OVERSEAS

Call 1-718-645-1818

FAX NUMBERS

Order Line.....1-718-998-5216

Customer Service.....1-718-382-8596

NO SURCHARGE ON CREDIT CARDS!

SAISFACTION, LOW PRICES, & EXCELLENT SERVICE GUARANTEED!

SONY

CAMCORDER

CCD-VX3.....2549.99	CCD-TR23.....479.99
CCD-TR3000.....CALL	CCD-TR V70 1329.99
CCD-TR700.....1039.99	CCD-TR V40.....869.99
CCD-TR600.....839.99	CCD-TR V30.....699.99
CCD-TR400.....729.99	CCD-FX730V.....644.99
CCD-TR100.....679.99	CCD-FX630.....534.99
CCD-TR93.....679.99	CCD-FX530.....519.99
CCD-TR83.....609.99	CCD-FX430.....479.99
CCD-TR73.....559.99	CCD-FX330.....469.99
CCD-TR33.....499.99	CCD-SC5.....569.99
CCD-TR30.....479.99	CCD-SC6.....CALL

PAL MODELS ALSO AVAILABLE!

TELEPHOTO & WIDE ANGLE LENS SET

FOR ANY CAMCORDER SHARP OPTICS

REGULAR \$149.99

\$99.99

WITH A CAMCORDER PURCHASE

HI RESOLUTION 199.99

SONY VHS VCRs

SLV-R1000.....CALL	SLV-720HF.....279.99
SLV-940.....349.99	SLV-640.....264.99
SLV-920HF.....349.99	SLV-620HF.....259.99
SLV-780.....314.99	SLV-440.....219.99
SLV-770HF.....289.99	SLV-420.....209.99
SLV-740.....289.99	SLV-340.....189.99

8MM VCRs

EV-S7000.....1384.99	EV-C200.....CALL
EV-S5000.....CALL	EV-A50.....339.99
EV-S2000.....714.99	EV-A60.....CALL
EV-C100.....439.99	EV-S50.....849.99
EV-C25.....269.99	

BETA VCRs

SL-HF2000.....CALL	SL-S600.....CALL
MDP-650.....CALL	MDP-550.....CALL

LASER DISCS

RECEIVERS

STR-D1015.....369.99	STR-D715.....249.99
STR-D965.....309.99	STR-D665.....224.99
STR-D915.....299.99	STR-D615.....209.99
STR-D865.....279.99	STR-D565.....184.99
STR-D515.....179.99	

COMPACT DISC

CDP-CX151.....439.99	CDP-C445.....184.99
CDP-C910.....284.99	CDP-C365.....169.99
CDP-C745.....269.99	CDP-C345.....169.99
CDP-C545.....229.99	CDP-C265.....159.99

CASSETTE DECKS

TCX-615.....259.99	TC-WR465.....129.99
TC-WR665.....209.99	TC-WR445.....124.99
TC-WR565.....159.99	TC-WR365.....CALL
TC-WR345.....99.99	

JVC

CAMCORDER

GR-S29.....CALL	GR-S27.....969.99
GR-AX900.....649.99	GR-AX75.....574.99
GR-AX800.....569.99	GR-AX70.....519.99
GR-AX700.....509.99	GR-AX37.....479.99
GR-AX350.....519.99	GR-SV3.....524.99
GR-AX200.....469.99	GR-EZ1.....369.99

JVC VCRs

HR-S7200.....CALL	HR-VP422.....184.99
HR-S7100.....579.99	HR-J620.....229.99
HR-S5200.....CALL	HR-J420.....169.99
HR-S5100.....474.99	HR-J220.....159.99
HR-VP720.....359.99	HR-A61.....229.99
HR-VP628.....299.99	HR-A41.....169.99
HR-VP624.....259.99	HR-A21.....159.99

JVC PROFESSIONAL

GR-S378 S-VHS VCR.....CALL	
SR-S360 S-VHS VCR.....CALL	
TM-130 SU MONITOR.....239.99	
TM-9U MONITOR.....289.99	

JVC RECEIVERS

RX-817VIN.....339.99	RX-S17VIN.....204.99
RX-717VIN.....279.99	RX-S17TN.....139.99

JVC CD PLAYERS

XL-MC100.....569.99	XL-V261TN.....114.99
XL-M509TN.....219.99	XL-V161TN.....99.99
XL-M415TN.....169.99	XL-GMB00TN.....CALL
XL-F211TN.....164.99	XM-D1 MINI DISC.....CALL

CASSETTE DECKS

TD-V661TN.....219.99	TD-W315TN.....149.99
TD-R461TN.....119.99	TD-W215TN.....119.99
TD-W709TN.....194.99	XD-2507TN.....CALL

JVC

MINI COMPONENT SYSTEM

MX-C995.....694.99	MX-C33.....419.99
MX-C77.....574.99	MX-S20.....CALL
MX-C55.....464.99	UX-C7.....CALL
UX-T1.....249.99	

JVC VIDEO PERIPHERALS

JX-ED11 EDIT TOOL.....79.99	
JX-S700.....379.99	
JX-SV55 Video Editing Processor.....309.99	
JX-T88 Character Generator.....164.99	
JX-T66 Character Generator.....79.99	
JX-S300 AV Selector.....169.99	
JX-S100 VHS Switcher.....64.99	

Panasonic

CAMCORDER

PV-D705.....819.99	PV-IQ205.....479.99
PV-S64.....1009.99	PV-S770.....919.99
PV-54.....819.99	PV-960.....579.99
PV-IQ505.....609.99	PV-950.....509.99
PV-IQ405.....559.99	PV-940.....459.99
PV-IQ305.....499.99	PV-910.....499.99

VHS VCRs

PV-S4580.....639.99	PV-A561.....229.99
PV-4570.....CALL	PV-4551.....CALL
PV-S4566.....344.99	PV-4514.....194.99
PV-4564.....289.99	PV-4511.....179.99
PV-4562.....259.99	PV-4501.....CALL
PV-2501.....CALL	

PRO VCRs

AG-1290.....209.99	AG-5700.....1174.99
AG-1970.....1094.99	AG-W1.....1489.99
AG-1300.....CALL	

PRO CAMCORDER

AG-455.....CALL	AG-188.....539.99
AG-456.....1659.99	AG-195.....889.99
AG-187.....479.99	AG-196.....CALL
AG-3 CHIP S-VHS-C.....2129.99	
AG-DP800 SUPERCAM.....CALL	

PRO ACCESSORIES

WJ-AV7.....819.99	WJ-AX30.....1744.99
WJ-AV65.....769.99	AG-A96.....349.99
WJ-TTU.....259.99	CT-1384V.....254.99
WJ-AX50.....CALL	CT-1384V.....289.99

PIONEER

LASER DISCS

CLD-D704.....689.99	CLD-D504.....369.99
CLD-D604.....579.99	CLD-S304.....289.99
CLD-S104.....224.99	
CLD-V860 KARAOKE.....CALL	
CLD-V850 KARAOKE.....649.99	
CLD-V750 KARAOKE.....479.99	
CLD-A100 INTERACTIVE.....389.99	

WE CARRY PIONEER MICROPHONES!

RECEIVERS

VSK-D35.....1089.99	VSK-A54.....204.99
VSK-D903S.....669.99	VSK-A53.....194.99
VSK-D704S.....524.99	SK-303R.....14

BEACH

BRINGING YOU THE FUTURE OF ELECTRONICS TODAY!

203 Route 22 East, Greenbrook NJ 08812

New York Prices.....With New England Service!

FOR INFORMATION.....1-908-424-1101 NJ & CANADA.....1-908-424-1101

24 HR FAX ORDER LINE 1-908-424-1105 CUSTOMER SERVICE.....1-908-424-1103

JOIN THE THOUSANDS OF SATISFIED BEACH CUSTOMERS! WELCOME TO "TOTAL USA WARRANTY" AT THE LOWEST LEGITIMATE PRICES

Our Advertised items include Full USA Manufacturers Warranty which means all merchandise is Brand New, Factory Fresh and is Warranted by the Manufacturer & are the same items you will find in your local video/electronics store, but at much lower prices and door to door service! Don't be Misled by prices for "Store Warranty" or "Grey Market" items. Shop Beach and buy what you want to buy! Our friendly Sales Associates will make you a lifetime customer! Let Us Make You Happy Shop Beach!

Canon
USA Manufacturer's Warranty Included!
Hi8
OPTICAL IMAGE STABILIZER
BONUS FREE CASE & TRIPOD!

ES-2000
ES-5000
ES-800
ES-600
ES-550
LOWEST PRICE GUARANTEED



Hi8
Hi8 Hi-Fi, RC Time Code, 15x Zoom, Interchangeable Lens System
LENSES FOR L2 - IN STOCK
CL5-15MM, CL10-100MM, CL250MM,
E20 V. ADAPTER, CL-2X, EX ZOOM CALL
CANON ULTRASONIC LENSES.....CALL

JVC
USA Manufacturer's Warranty Included!
BONUS FREE CASE & TRIPOD!



VHS-C CAMCORDERS
NEW GRAX-900 EIS, COLOR.....669.99
NEW GRAX-800 EIS.....599.99
NEW GRAX-700 COLOR.....549.99
NEW GRAX-200.....499.99
NEW GRAX-350.....529.99
NEW GR-SZ7.....979.99
NEW GR-SZ9.....1129.99

VCRS
HR-S7100.....569.99 HR-VP28U.....CALL
HR-S5100.....519.99 HR-J620.....239.99
HR-VP720.....369.99 HR-J410.....179.99
HR-VP618.....299.99 HR-J220.....189.99
NEW HR-S200.7200.....CALL

RCA
BONUS FREE CASE & TRIPOD!
USA Manufacturer's Warranty Included!



8MM CAMCORDERS
PRO 844 24-1 ZOOM, FEH 1 LUX.....NEW!
PRO 846 24-1 ZOOM, COLOR VIEWFINDER.....NEW!
PRO 932 24-1 ZOOM, COLOR VIEWFINDER, EIS.....NEW!
PRO 942 24-1 ZOOM, COLOR VIEWFINDER, EIS.....NEW!
VHS COMPACT CAMCORDERS
CC 603 12-1 ZOOM, TITLER, 1 LUX, MACRO.....NEW!
CC 612 12-1 ZOOM, TITLER.....NEW!
CC 616 COLORVIEW, 12-1 ZOOM, REMOTE.....NEW!
CC 620 24-1 ZOOM, COLOR VIEWFINDER EIS.....CALL

VHS CAMCORDERS
CC 414, 420, 422, 547.....CALL
VCRS
VR 721HF 5-VHS, HI-RESOLUTION, DIGITAL.....CALL
VR 725HF FEH, DIGITAL SHUTTLE, 5-VHS, DSS.....NEW!
RCA DSS SATELLITE.....CALL

Panasonic
USA Manufacturer's Warranty Included!
Panasonic
PV-10505
FREE CASE & TRIPOD!

VHS-C
USA VHS-C CAMCORDERS
PV1Q-505.....629.99 PV1Q-205.....509.99
PV1Q-305.....539.99 PV-54.....839.99
PV1Q-405.....579.99 PVS-64.....CALL
NEW PVD-705 DIGITAL SPECIAL EFFECTS.....CALL
Ask about our Camcorder's 3 Year Extended Service Contract

USA VHS CAMCORDERS
NEW PV950 COLOR VIEWFINDER.....529.99
PV-960.....599.99
PV-S 770.....CALL

NEW 1995 USA VHS VCRS
NEW PV-2501 2 HEAD, PROGRAM DIRECTOR.....179.99
NEW PV-4501 4 HEAD, REMOTE.....189.99
NEW PV-4511 4 HEAD, VCR PLUS.....199.99
NEW PV-4514 4 HEAD, HEAD CLEANER.....214.99
NEW PV-4551 4 HEAD, HI-FI, MTS.....259.99
NEW PV-4562 HI-FI MTS, BILINGUAL.....269.99
NEW PV-4562.....289.99
NEW PV-4564 2 VCR CONTROLS, HI-FI.....329.99
NEW PV-4566 5-VHS, VHS SHUTTLE.....CALL
NEW PVS-4566 5-VHS, HI-FI, VCR PLUS.....369.99
NEW PVS-4580 5-VHS, T.R.C., JOC, HI-FI.....689.99

Panasonic
PRO INDUSTRIAL HEADQUARTERS



AG-456

S-VHS
\$1689.99

USA Manufacturer's Warranty Included!

GUARANTEED LOWEST PRICES!

PRO INDUSTRIAL SYSTEM

AG-456 5-VHS, MANUAL & AF.....1689.99

AG-195 VHS DIGITAL EFFECTS.....949.99

AG-DP800 SUPERCAM, 3 CCD.....5999.99

AG-3 5-VHS-C, 3 CCD.....2299.99

PRO INDUSTRIAL VCRS

AG-1970 TBC, EDIT VCR.....1139.99

AG-1290 4 HEAD VCR.....CALL

NEW AG-1300.....CALL

AG-5700 PORTABLE AG-1970.....CALL

AG-W1 UNIVERSAL VCR.....CALL

CT-1383Y, 1384 VY MONITOR.....CALL

PRO DIGITAL MIXERS

WJ-MX30 DIGITAL AV MIXER.....1979.99

WJ-MX50 CHROMINANCE KEY.....CALL

WJ-AVE5.....789.99 WJ-AVE7.....839.99

JVC
PROFESSIONAL
USA Manufacturer's Warranty Included!

PROFESSIONAL CAMCORDERS
GYX2U.....CALL
JVC EDIT DESK.....IN STOCK
PROFESSIONAL EDITING DECKS
BR-S360U, BR-S378U, BR-S800U, BR-S800U
RECORDER RM-G800U CONTROLLER.....CALL

SONY
USA Manufacturer's Warranty on all Sony Products!
NEW! CCD-TR93
FREE CASE & TRIPOD!

SONY USA 8MM CAMCORDERS
CCD TR700.....1189.99 CCD TR23.....499.99
CCD TR600.....849.99 CCD TR-V70 1369.99
CCD TR400.....CALL CCD TR-V40 889.99
CCD TR100.....CALL CCD TR-V30 689.99
CCD TR93.....699.99 CCD FX630.....579.99
CCD TR83.....649.99 CCD FX230.....479.99
CCD TR73.....589.99 CCD VX3.....CALL
CCD TR33.....539.99 CCD VX1 PAL.....CALL
PAL SYSTEMS.....CALL

WE WILL MEET OR BEAT YOUR LOWEST LEGITIMATE PRICE ON ANY SONY PRODUCT!

SONY USA 8MM VCRS
NEW EVG-200.....CALL EVA-50.....349.99
EVC-100.....469.99 EVS-5000.....CALL
GVS-50.....799.99 EVS-7000.....1499.99

NEW SONY USA VHS VCRS
SLV-340.....239.99
SLV-440.....249.99
SLV-640HF.....309.99
SLV-740HF.....329.99 SLV-R1000.....CALL
SLV-780HF.....349.99 SLS-800.....449.99
SLV-940HF.....379.99 SLH-2000.....649.99

SONY INDUSTRIAL

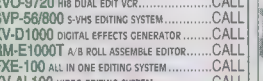


EVV-300 3CCD HI8 PRO CAMCORDER.....CALL
CVD-1000 V-DECK HIS COMPUTER VCR.....CALL
EVO-9720 HIS DUAL EDIT VCR.....CALL
SVP-56800 5-VHS EDITING SYSTEM.....CALL
XV-D1000 DIGITAL EFFECTS GENERATOR.....CALL
RM-E1000T A/B ROLL ASSEMBLY EDITOR.....CALL
FXE-100 ALL IN ONE EDITING SYSTEM.....CALL
XV-AL100 VIDEO EDITING SYSTEM.....CALL

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

MITSUBISHI
USA Manufacturer's Warranty Included!



WANT TO BUY A MITSUBISHI VCR? CALL US?

VCRS
U100.....CALL U550.....CALL
U200.....CALL U650.....CALL
U250.....CALL U770.....CALL
U500.....CALL 3 YEAR WARRANTY.....CALL
MITSUBISHI TELEVISIONS.....CALL

NEW! 1995 SONY AUDIO
CALL FOR AVAILABILITY & PRICES

USA BEGINNERS PACKAGE

Includes: 5 VIDEO TAPES, DELUXE CAMCORDER CASE, STRAP, FULL SIZE VIDEO TRIPOD, HEAD CLEANER, VIDEO LIGHT, DELUXE CLEANING KIT AND USA WARRANTY! A \$300 VALUE!

USA ADVANCED PACKAGE

Includes: HIGH POWER EXTRA BATTERY, 6 VIDEO TAPES, DELUXE CAMCORDER CASE, STRAP, FULL SIZE VIDEO TRIPOD, VIDEO REWINDER, VIDEO LIGHT, CAR CORD ADAPTER, UV PROTECTION FILTER DELUXE CLEANING KIT & USA WARRANTY! A \$450 VALUE!

USA PROFESSIONAL PACKAGE

Includes: 2 HIGH POWER EXTRA BATTERIES, PRO DLX CAMCORDER CASE, PRO DELUXE FLUID HEAD VIDEO TRIPOD, 10 VIDEO TAPES, CAR CORD ADAPTER, DLX VIDEO WIDE LENS, DLX THREE PIECE FILTER KIT, DELUXE CLEANING KIT & USA WARRANTY! A \$650 VALUE!

TO ORDER CALL TOLL FREE! 1-800-572-3224
New Jersey Resident add 6% Sales Tax

OPEN SUNDAY **NO TAX IF SHIPPED OUT OF NJ** **EXPRESS SHIPPING AVAILABLE!** **SCHOOL GOVT & CORPORATE P.O.'S ACCEPTED**

SHARP VIEWCAM
USA Manufacturer's Warranty! Authorized Dealer



NEW SHARP REBATES
Hi-8 Viewcam, 4" Color LCD Screen, 270° Variable Angle Recording
Now Is The Time To Buy New Models! 8MM VIEWCAMs

NEW VLE-37.....549.99*
NEW VLE-47.....699.99*
NEW VLH-420.....999.99*
NEW VLH-450.....1289.99*
SLIMCAM VHS CAMCORDERS
*PRICES LISTED AFTER SHARP REBATES

HITACHI
USA Manufacturer's Warranty Included!

"USA" CAMCORDERS
VM-E310 COLOR VIEWFINDER.....NEW
VM-E410A 24-1 ZOOM, EIS, 16:1 FADE.....NEW
VM-E510A 270K CHIP, CLR VIEWFINDER, TITLER.....NEW
VMH-710A.....NEW
VMH-54.....CALL VME-58.....CALL
VMH-56.....CALL VME-59.....CALL
VMH-71.....CALL
VM1700, 2800, 3800.....CALL

"USA" VCRS
VT270 4 HEAD, FRONT A/V.....CALL
VT282 4 HEAD, VCR PLUS.....CALL
VT284 4 HEAD, VCR PLUS.....CALL
VT370 4 HEAD, HI-FI STEREO.....CALL
VT380 6 HEAD.....CALL VT391 6 HEAD.....CALL
VT382 6 HEAD.....CALL VT-482 6 HEAD.....CALL
VT772 5 HEAD, 5-VHS.....CALL

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

VIDEONICS
Authorized "USA" Dealer!



SPEAK WITH ONE OF OUR EDITING PROS AT BEACH
DIGITAL VIDEO MIXER MX-1.....CALL
TITELMAKER 2000.....CALL
SOUND EFFECTS MIXER.....CALL
BOING BOX.....CALL
THUMBS UP.....CALL
AB-1 EDIT SUITE CONTROLLER.....CALL

sima
VIDEO NECESSITIES

NEW FILM EDITOR.....CALL
PRO EDIT 5.....249.99
PRO EDIT 4.....169.99
IR AUTO EDIT (SED-IR).....104.99
COLORWRITER.....169.99
PRO EDIT 3.....109.99
SCREENWRITER.....129.99
PC VIDEO EDIT.....49.99
SPM 1.3,4,7,9,10.....CALL
NEW PRO-WIRELESS MIC.....98.99

DESKTOP VIDEO

GOLD DISK VIDEO DIRECTOR.....98.99
FAST MOVIE MACHINE.....449.00
FAST MOVIE LENSE.....899.00
AVER VIDEO SUITE.....599.00
AVER PRO.....499.99
CALL US FOR ALL YOUR EDITING NEEDS

PAL SYSTEM
CAMCORDERS AND VCR'S
SONY, PANASONIC, JVC,
SHARP, AIWA, AKAI
FULL INVENTORY AT THE LOWEST PRICES

Nikon
The Best Quality Camcorders!
8MM CAMCORDERS

NEW VN-400 SAME AS SONY CCD-TRV30.....CALL
NEW VN-360 SAME III SONY CCD-TR93.....CALL

PIONEER
GREAT HOME THEATER
USA Manufacturer's Warranty!



RECEIVERS
VSX-D903S.....CALL VSX-453.....CALL
VSX-D704S.....CALL SX-303R.....CALL
VSX-D604S.....CALL SX-253R.....CALL
VSX-D504S.....CALL SX-203R.....CALL
VSX-454.....CALL VSX-D3S.....CALL

LASER KARAOKE PLAYERS
CLD-V750.....CALL CLD-D904.....CALL
CLD-V850.....CALL CLD-D504.....CALL
CLD-V704.....CALL CLD-D604.....CALL

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

GO VIDEO
"USA" DUAL DECK VCRS

NEW GV8020 8MM VHS.....669.99
NEW GV8050 PC COMPATIBLE.....769.99
GV 3090.....689.99 GV 3060.....689.99
GV 3080.....679.99 GV 4060.....CALL
GV 3020.....539.99

All merchandise is brand new, factory fresh and includes USA Manufacturer's Warranty. Prices quoted are for Mail Order Only. Satisfaction Guarantee Exchange or Refund less shipping and handling within 15 days of receipt of merchandise if it returned in original factory package, in mint condition, and unopened. Please call 908-424-1103 for Return Authorization Number before returning product. Non-defective merchandise returned for refund will be subject to a restocking fee. 10% if box has been opened. *FREE CASE & TRIPOD. WEAPY CAMCORDER PURCHASE THIS MONTH ONLY. Prices effective through November 1, 1995. Prices advertised are subject to Additional Standard Shipping Charges. Please call for details. Prices are subject to verifiable manufacturer's price increases and discounts. All major credit cards gladly accepted, no surcharge. We are not responsible for typographical errors. Thank you for shopping with Beach. Please tell your friends about our great service! Retail store prices may differ. VM1-195

BEACH VIDEO & AUDIO READER SERVICE CARD

VISIT OUR VIDEO, COMPUTER, CAMERA, ELECTRONICS SHOWROOM. CALL 908-968-6400 FOR INFO.

VIDEO NECESSITIES



VIDEONICS

TM-2000 448
EQUALIZER CALL
NEW PALLOTT CALL
NEW AEDIT SUITE CALL



888

JVC

JXT-66...97
JXT-88...177
JXS-V55...327
JDX11...79
JXS-700...397



simco

SPM-4 (ACDC QUICK DISCHARGE) 49
SPM-3 (ACDC CHARGE RECOND BATT) 49
SPM-7 (DISCHARGER) 49
TESTER W/ OVERCHARGE PROTECTION CALL
NEW SPM-10 59
SPX-4 (EDITOR) 157
SPX-6 (DIGITAL EFFECT GENERATOR) 227
SPXL (NEW ADVANCED COMBO) SPECIAL 197

CITIZEN MONITOR

M329 (MARK II) 2.9" 137
M938 3.9" 197
ADAPTOR 197



CASIO Monitors Available

NADY

AZDEN
MICROPHONES
RECORDERS

WE DISCOUNT VIDEO TAPES PLEASE CALL

WE ARE AUTHORIZED DEALERS
FOR EVERY BRAND YOU SEE IN
THIS ADVERTISEMENT!!!



bogen

SLK - MICCO
PHOTO-
VIDEO



VCR & CAMCORDER EXTENDED WARRANTIES

(local) 2 YEAR, 3 YEAR, 5 YEAR CALL

WIN A **FREE** HOME THEATER SYSTEM GET A **FREE** 1 YEAR SUBSCRIPTION TO OUR ELECTRONICS NEWSLETTER

USA DIRECT

You won't find a better source for home electronics than USA DIRECT...
all the quality items you want, all the leading brands you want—from A to Z

(800) 959-4434

WIN A FREE HOME THEATER SYSTEM OR A \$100 SAVINGS CERTIFICATE

PICTURED ON THE RIGHT ARE 5 COMPONENTS.

Correctly identify the models on a 3" x 5" card sent to the address below. Your name will be entered in a drawing for a chance to win the system FREE! We've already given you two model numbers — all you need is a total of 3 correct model numbers to qualify. If you qualify, your name will be entered in a drawing for a chance to win the system FREE!

AS AN ADDED BONUS, the first 25 correct entries received each week will automatically receive a \$100 Savings Certificate good on any purchase of \$500 or more from USA Direct.

Win This System!



SYSTEM INCLUDES:	
RCA DSS Satellite System	Retail \$ 699.95
JVC WIDE SCREEN TV 16:9 projection 2 tuner R.P. full-motion split screen	Retail \$ 4499.95
PIONEER ELITE	
CLAW CATCH Laser Disc Player, AC/3 Ready	Retail \$ 900.00
SONY	
STRG700ES 70 MM 1/2 25 KHz 2 Dolby ProLogic Receiver	Retail \$ 550.00
KLIPSCH complete 5PC home theater loudspeaker system including 8 powered subwoofer	Retail \$ 999.00
Total Retail Price \$ 7648.90	
OUR PRICE \$ 4950.00	

Save over 35%



FREE MONTHLY NEWSLETTER

- New product reviews
- Inside industry news
- Direct international prices on all your favorite brands
- Exciting special offers
- Incredible monthly specials
- Detailed service contract info
- Tips on getting the most from your equipment
- Hottest new technology products.

FREE 5 yr. Combined Factory Warrantee & Service Contract

WE OFFER MORE!

FREE Shipping, Handling & Insurance

AMAZINGLY LOW PRICES

FREE Scheduled Maintenance

FREE Price Protection Assurance

FREE Electronic & Mechanical Performance Guarantee

• Next Day Delivery Available

**MASTERCARD, VISA,
AMERICAN EXPRESS,
DISCOVER & JCB CARD**



USA DIRECT

535 MIDLAND AVENUE
GARFIELD, NEW JERSEY 07026
(800) 959-4434, Fax (800) 411-4434

We will draw one of the correct entries on November 15, 1995, and the Grand Prize winner will be announced in the December 1995 issue of the USA DIRECT Newsletter. You may also write to us after November 15, 1995 at our address in Garfield, NJ to request the winner's name. Send your entry to us on a 3" x 5" card. All correct entries received by November 15, 1995 are eligible. Entries with any duplicated information will be disqualified. Only one entry permitted per household. Contest void where prohibited, taxed or restricted. All goods covered by original manufacturer's or importer's limited warranty and/or by comprehensive 5-year service contract. Some prices may be affected by prevailing currency exchange rates. Not responsible for typographical errors.

The Largest Selection Of Name Brand Electronics At
The Absolute Lowest Prices! From 20%-60% Off List!

SONY **Panasonic** **JVC** **BOSE**
HITACHI **Canon** **PIONEER** **Karaoke**
RCA **GO.VIDEO** **SHARP** **TOSHIBA**

name brand camcorders

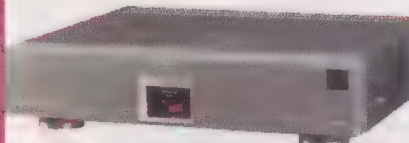
all at the guaranteed lowest prices.

SHARP VLE-42 4" Color LCD\$819
Panasonic PV-IQ505 HiFi, Color VFReduced!
NEW! Digital Camcorders Reserve Yours Today!
Hitachi Compact Hi 8 Color VF Stabilizer ...\$799
Sony Camcorders at the guaranteed lowest price!



8mm, beta, & vhs vcrs

all at the guaranteed lowest prices



Sony Industrial 8MM EVO-520\$279
Super Beta slow motion\$399
Panasonic 4 Head Hi Fi Stereo\$219
Toshiba Flying Pre-amp 6 Hr recording\$350
PANASONIC PV-4366 S-VHS HiFi Shuttle \$349

PLEASE CALL FOR VIDEO EDITORS AND MIXERS

hi fi stereo receivers



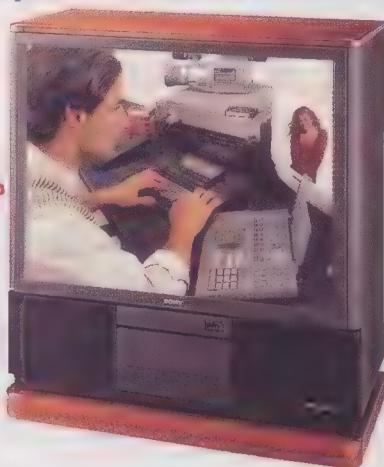
Dolby Pro logic 100 watts per channel\$199
NEW Dolby Surround AC-3/Pro LogicCALL
THX/Dolby Pro Logic Receiver\$799
Dolby Pro logic 125 wpc, multi room-multi
source programming, 5 Spkr outputs\$669

video editors & mixers

Videonics MX-1 Special Effects Generator..CALL
Videonics AB-1 AB Roll Time Code CMX...CALL
Videonics TM-2000 Hi Resolution TitlerCALL
Sony XVD-1000 Frame SynchronizerIn Stock!
Panasonic WJAVE-7 Pro Mixer.....Blowout!
Free Instructional Video with mixer purchase!

the home theater system

We have all the technology your looking for,
Super Flat, SFT Perfect, Ultra Vision and more!

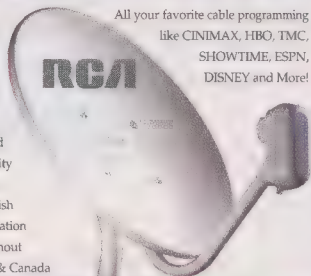


100" High Resolution LCD Front Proj.....\$1995
60" RCA PIP, Surround, Univ Remote\$1999
50" Dolby Pro Logic Rear Projection\$1999
45" Cinema Wide PIP Surround.....\$1599
35" Tube MTS Stereo & Surround.....\$999
25" Philips Table Top w/Remote.....\$259

RCA
DIGITAL SATELLITE SYSTEM
NOW AVAILABLE WITH INSTALLATION AROUND THE USA

All your favorite cable programming
like CINIMAX, HBO, TMC,
SHOWTIME, ESPN,
DISNEY and More!

- 175 Channel Capability
- CD Quality Surround Sound
- Laser Disc Quality Video Image
- Small 18 Inch Dish
- Fast Easy Installation available throughout the entire USA & Canada



Starting at \$599

laser combi players



425 lines of resolution & CD audio all wrapped
into one package!

Pioneer CLDV-860 Laser Karaoke ..Reduced!
NEW60 Disc CD Changer\$249
24 Disc CD Changer\$199
100 Disc CD Changer.....\$349
CD & Laser Video with auto reverse ..\$379

To finish the system off a great pair of room shaking

loudspeakers Bose, Advent, BIC & more!



Two Rear & One Center Channel Pkg\$99
Front Channel Bookshelf Speakers\$79
Mitsubishi Dual Satellite Speaker &
Subwoofer System\$199
6 Pc. Full Surround System w/subwoofer\$549

bookshelf mini systems

Dual Cassette, 24 CD Changer 200 watts...\$369
Dual Cassette, 3 CD Changer 100 watts.....\$299

We carry all
your favorite
makes and
models.
Please call
for your best
delivered
price!



**AUTHORIZED
ELECTRONICS** **SAVE**
ONE
CALL DOES IT ALL

1-800-374-7125

SAMMAN'S ELECTRONICS 1166 HAMBURG TPKE WAYNE, NEW JERSEY

All prices quoted include Manufacturer's standard accessories & U.S. Warranty

All units are factory sealed We ship within 24 hours Customer Service 201-696-6531

**FOR
ORDER**

YOUR ONE STOP HOME THEATRE SHOP

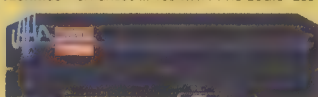
YAMAHA

**RXV-890
PRO LOGIC REMOTE RECEIVER**
• 100 Watts P/C X 3 (Left, Center, Right)
• 20 Watts Per Channel X 2 (Rear Surround Channels) • Dolby[®] Pro Logic

\$729

COMPETITOR'S PRICE.....\$899

DENON AVR-900.....120 WATT PRO LOGIC 319
JVC RX-717VTN.....210 WATT PRO LOGIC 319
KERNWOOD KRV-8070.....240 WATT PRO LOGIC 449
SHERWOOD RV-7050R.....PRO LOGIC TOP RATED 449
SONY STR-D865.....80 WATT PRO LOGIC 299
TECHNICS SA-GX690.....100 WATT PRO LOGIC 299



DENON

**DCM-460
5 DISC CAROUSEL REMOTE CHANGER**
• Auto Disc Loading System • Alpha Processing • Disc Skip • 8X OS
• Two 20-Bit DAC • Coaxial Digital

\$299

COMPETITOR'S PRICE.....\$399

DENON DCM-340.....5 CD CAROUSEL CHANGER 219
FISHER DAC-6015.....60 CD CHANGER REMOTE 349
PHILIPS CDC-935.....5 CD CAROUSEL CHANGER 229
TECHNICS SL-PD887.....5 CD CAROUSEL CHANGER 189
SONY CDP-C545.....5 CD CAROUSEL CHANGER 249
YAMAHA CDC-655.....5 CD CAROUSEL CHANGER 249

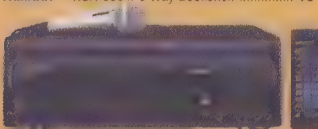
ADVENT

**PRODIGY TOWER
2 WAY
AUDIOPHILE BOOKSHELF**
• 2 Way Design
• Video Shielded
• 5" Woofer
1" Titanium Tweeter

\$199

COMPETITOR'S PRICE.....\$299

SPEAKER PRICES PER PAIR
ADS MS-3.....150W Powered Subwoofer 899
ADVENT BABY II.....Award Winning Bookshelf 99
APOGEE SLANT 6.....RIBBON SPEAKERS IN STOCK
CELESTION MODEL 5.....2 Way Audiophile.....199
JBL J-CENTER Center Channel.....EACH 99
JBL LX-600.....12" 3 Way Floorstanding.....399
VELODYNE VA-810X.....Powered SUB.....449
YAMAHA NSA-636.....3 Way Bookshelf.....79



PIONEER

**CLDV-860
COMBO MULTI CD/LASER
KARAOKE PLAYER**
• 1 Bit DLC With Pulse-Flow DAC
• Digital Echo • One Touch Karaoke
• Two Mic Inputs With Gain Control
• 24-Track Programming • Remote

FULL LINE OF LASERS IN STOCK

BOSE

**AM-7
200 WATT
SUBWOOFER
SATELLITE
SYSTEM**

• Acoustimass Bass Module W/ Two 5 1/4" Woofers • Magnetic Shielding

\$799

COMPETITOR'S PRICE.....\$899

MULTI-SYSTEM SPECIALISTS

TELEVISIONS, VCRs, LASERS, AND PAL CAMCORDERS 110-220 VOLT • 50-60 CYCLE PAL-SECAM-MESECAM-NTSC-FORMAT



PANASONIC

**PV-4562
4 HEAD HI FI STEREO VHS
RECORDER WITH VCR PLUS**
• English/Spanish On-Screen Displays
• Automatic Daylight Savings Time
• Digital Auto Tracking • Remote Control

\$299

COMPETITOR'S PRICE.....\$379

JVC HR-A61U.....4 HEAD HI-FI STEREO 249
MITSUBISHI HSU-560.....4 HEAD HI-FI STEREO 399
PANASONIC PV-4551.....4 HEAD HI-FI STEREO 239
SONY SLV-780HF.....4 HEAD HI FI VCR.....369

ATLANTIC TECHNOLOGY SPECIALS

153c 120 WATT CENTER CHANNEL SPEAKER

• Two 3 1/2" Polypropylene Woofers • 1/2" Dome Tweeter
• Voiced For Accurate Reproduction Of Soundtracks

\$69 EACH

SPEAKER PRICES PER PAIR	MSRP	SALE
ATLANTIC TECHNOLOGY 151LR	159	PAIR 89
ATLANTIC TECHNOLOGY 154SR	159	PAIR 99
ATLANTIC TECHNOLOGY 251LR	299	PAIR 199
ATLANTIC TECHNOLOGY 253C	279	EACH 179
ATLANTIC TECHNOLOGY 254SR	299	PAIR 199

FACTORY BLEMISHED 2 YEAR MANUFACTURERS WARRANTY PARTS AND LABOR FIRST COME FIRST SERVED LIMITED QUANTITIES

Authorized Dealer For:



BOSE AM3 SII	3 PIECE ACOUSTIMASS SYSTEM
BOSE AM4	4 PIECE ACOUSTIMASS SYSTEM
BOSE AM5 SII	3 PIECE ACOUSTIMASS SYSTEM
BOSE 201 SII	120W TWO-WAY BOOKSHELF
BOSE 301 SII	150W TOP RATED BOOKSHELF
BOSE 501	200W FLOORSTANDING
BOSE 701	400W FLOORSTANDING
BOSE 101 SV	TOP OF THE LINE SPEAKER SYSTEM
BOSE 101	60W INDOOR/OUTDOOR
BOSE 141	80W BOOKSHELF SPEAKERS
BOSE VS-100	CENTER CHANNEL SPEAKER
BOSE MODEL 100	80W FULL-RANGE SPEAKERS
BOSE 151	INDOOR/OUTDOOR SPEAKERS
BOSE 301 SONATA	LIMITED EDITION SPEAKER
BOSE LS-3 SII	LIFESTYLE SYSTEM
BOSE LS-5 SII	LIFESTYLE SYSTEM
BOSE LS-12	LIFESTYLE SYSTEM

ALL BOSE ACCESSORIES AVAILABLE



MITSUBISHI

**VS-5041
50" STEREO PROJECTION TV**
• Picture-in-Picture • On Screen Displays • Stereo Broadcast Reception • Cable Compatible

\$1899

COMPETITOR'S PRICE.....\$2399

MITSUBISHI VS-4541.....50" PROJECTION.....1699
PANASONIC CT-27SF12.....27" SUPERFLAT.....529
SONY KV-27V15.....27" STEREO P-I-P.....549
TOSHIBA CF-35D50.....35" STEREO P-I-P.....1099

PANASONIC

**PV-IQ505
8MM
CAMCORDER**

• 14X Zoom
• Built-In Light
• Low Light Capability
• Remote Control

\$599

COMPETITOR'S PRICE.....\$799



SHARP

**VLE37U
8MM VIEWCAM W/3" LCD DISPLAY**
• Flying Erase Head • 8X Power Zoom
• Remote Control

\$200 INSTANT 6TH AVE REBATE

SONY

**CCD-TR33
8MM
CAMCORDER**

• 12X Power Zoom
• Lens
• Low Light
• Remote

\$499

COMPETITOR'S PRICE.....\$599

SONY

**CCD-TRV30
8MM AUTOFOCUS
CAMCORDER**

WITH 3" LCD COLOR SCREEN
• 12X Power Zoom
• Lens • Remote

\$749

COMPETITOR'S PRICE.....\$899

CANON ES-1000.....HI-8 TOP RATED.....999
PANASONIC PV-IQ305.....Color Viewfinder.....499
SONY CCD-TR83.....24X Digital Zoom.....499

JVC

**GRAX-70U
VHS-C AUTOFOCUS
CAMCORDER**

• 12X Power Zoom
• Lens With Macro
• Palm Size • 7
• Special Effect Modes

\$549

COMPETITOR'S PRICE.....\$699

OUR TOLL-FREE NUMBER

800 394-6283

201 467-0100 • MON-FRI 9AM-7PM • SAT 10-6 • SUN 11-5

AUTHORIZED DEALERS FOR... PIONEER

Full Line of...TVs • Audio • Video • CD/Laser/Laser Karaoke • Rack & Mini Sys. • Home Theatre Systems



OPEN 7 DAYS A WEEK

**331 Route 4 West
Paramus, NJ 07652**
MONDAY-FRIDAY 10-9:30 SATURDAY 10-9 • CLOSED SUNDAY

**22 Route 22 West
Springfield, NJ 07081**
MONDAY-FRIDAY 10-9:30 SATURDAY 10-9 • OPEN SUNDAY 10-7

SE HABLA ESPANOL

**Don't Let
Our Name
Tool You!**



**We Are The
Video
Specialists!**

MEADTOWN SHOPPING CENTER • ROUTE 23 S. • KINNELON, NJ 07405

1-800-525-3DEAL

CAMCORDERS



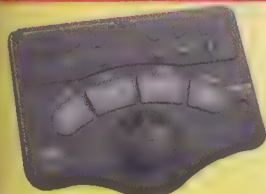
We Are An Authorized Dealer for
All Camcorder Brands We Carry.
All Formats Available From Such
Fine Manufacturer's As:

**Sony • JVC • Panasonic
Hitachi • Sharp • Canon**

We Also Carry A Full Line of
Batteries, Camcorder Bags,
Lights, Tripods, Filters, & more!



EDITORS



A Full Line of Editors,
Audio/Video Switchers and Titlers
Are Also Available To Give Your
Videos That Professional Look!

**JVC JXED11
JVC JXS100
JVC JXS300
JVC JXS700
JVC JXSV55**

Panasonic WJAVE7

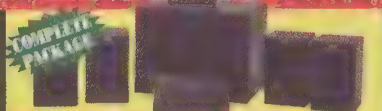
Call For More Information

HOME THEATER

No Home Theater is complete without
the right TV! Sound City carries a
large selection of TVs that will truly
bring the movie theater experience
home. Choose from Sony, JVC,
Hitachi, Panasonic and Many More!
TV's From 3' to 100" Available!



SPECIAL OF THE MONTH



Jamo Center 50

Center Channel Speaker
• 2-Way bass reflex speaker
• Dual 4" woofers
• 3/4" dome tweeter
• Video shielded
• 90 Watts peak power handling

Jamo SW600E

Powered Home Sub
• 100W Powered subwoofer
• Dual 10" bass units
• Ideal for home theater
• Electronic control box for
on/off, level, phase & freq.

2 pair Jamo Coronet 10

Compact Loudspeakers
• 2-Way bass reflex design
• 5 1/2" woofer 1" dome tweeter
• 90W power handling

**NOW ONLY
\$899**

Visit The Only
THX® Home Cinema
In The State of NJ!



VCRs



**Selection, Price and
Expert Advice**

All The Best Brands
At The Lowest Prices!

Choose From:

Hitachi • JVC • Mitsubishi
• Panasonic • Philips
• ProScan • Sharp • Sony

We Are Your Accessory HQ!
Rewinders • A/V Tape
A/V Interconnects
Head Cleaners & More.. Call

NEW ARRIVALS

New
State-of-
the-art 9"
personal
portable
TV with
swivel bracket...CALL



NOW
AVAILABLE
13" and 20"
TV/VCR
combos



**CALL FOR PRODUCTS
NOT LISTED**



Sound City is a Factory
Authorized dealer for every
brand we sell. This means
you get the convenience of
servicing your product
anywhere in the U.S.A.
Sound City offers the
largest selection of Audio,
Video, and Car Stereo.
At Sound City, our cus-
tomers are our #1 priority.
We make sure that you are
100% satisfied. Honest,
friendly service, before
and after the sale.
No Bait and Switch, and
we don't charge your card
until your order is
shipped.

Thank You,
Kamel Yassin
President
Sound City, Inc.

FACTORY AUTHORIZED

ADS • Advent • Audio Control • Aiwa • AKG • Altec Lansing • Audio Quest • Acoustic Research • Audio Source • Atlantic Technology • B&K
• B&O • Bazooka • BBE • Beyer Dynamics • Bellogetti • Brother • Canon • Carver • Cerwin Vega • Celestion • Clif Designs • Canton
• CodeAlarm • CWD • Denon • Dynamat • Grado • Hafler • Harmon/Kardon • Hitachi • Hughes • Infinity • Jamo • JBL • JVC • K40 Koss
• Lexicon • Mitsubishi • Monitor Audio • Monster Cable • Niles • OmniMount • Orion • Panasonic • Philips • Pinnacle • Pioneer • Panamax • PPI
• ProScan • PS Audio • Rane • Rockford Fosgate • Runco • Soundcraftsmen • Soundstream • Senheiser • Sherwood • Sharp • Sony
• Sonance • SSL • Stewart • Target • Technics • Terk • Thorens • Triad & More!

**FOR INFORMATION &
CUSTOMER SERVICE**

201-838-9100

**WE SHIP TO CANADA
WE SHIP WORLDWIDE**

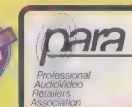
No Credit Card Surcharges
Se Habla Espanol

RETAIL HOURS

Mon - Fri
10am - 9pm EST
Saturday
9am - 6pm EST

MAIL ORDER HOURS

Mon - Fri
8am - 12pm EST
Sat 9am - 6pm EST
Sun 11am - 5pm EST



Some pictures for illustration only. Not responsible for typographical errors. • No refunds on video or car stereo products • 10 Day defective exchange from date of receipt • All returns must be made within 10 days of receipt of merchandise & are subject to a restocking fee • Items must be in original condition and packaging • Standard shipping and handling are not refundable • No tax on out of state purchases • Non-commissioned salesman • Next day and second day delivery available.

CIRCLE NO. 4 ON READER SERVICE CARD

VIDIComp INC

A Broadcast Systems Company Est. 1984
Your Industrial/Professional Experts



Export Inquires
Welcome!
Se Habla Español

1-800-263-8180 Toll Free

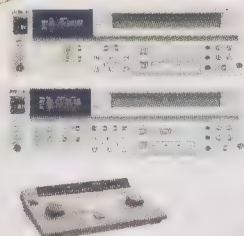
"POs Accepted From All Government and Educational Agencies"



SONY EVW-300 VIDEO Hi8 CAMCORDER

Advanced CCD Technology, Separate Y/C Signal Processing, High Quality Sound, Quick-start Recording, Camera Genlock Capability, Variable Speed Electronic Shutter, ClearScan Edit Search, Built-in Color Bar Generator.

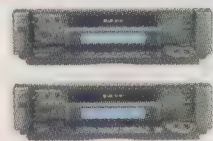
NEW!



SONY SVP-5600 SVO-5800 PVE-500 Professional Editing System

The SVP-5600 high quality S-VHS editing player, when combined with the SVO-5800 editing recorder and the PVE-500 edit controller, creates a flexible, cost efficient editing system. Excellent video/audio quality. Built-in TBC and Time Code. 4-Channel audio. Frame accurate editing.

NEW!



SONY Prosumer Editing System SVO-2000 RM-250

The SVO-2000 is an easy to use S-VHS Hi-Fi, editing recorder, in combination with the RM-250 editing controller unit. The SVO-2000 creates a simple and cost efficient two machine editing system, providing assemble, video/audio insert and program editing capability.



Panasonic

AG-456U S/VHS CAMCORDER



S-VHS Camcorder/Source for Editing. 12x 2 Speed Zoom lens, manual zoom, 24x & 100x Digital Zoom, Digital Special Effects, Wipe, Fade, Mix, Strobe, etc. Special Effects.

Panasonic

AG-DS850/840



Advanced Digital S-VHS Editing System, Full Field 3D TBC. 10 Step Digital Slow Motion. DNR. Built-in Time-Code. 16x capable. Component Output. Heavy-Duty Tape Transport with 5 motors. 32x Picture Search. 4 Channel Audio. Compact Chassis.

Panasonic

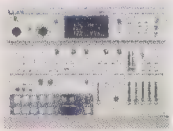
AG-DP800 S-VHS FIT 3-CCD DIGITAL SIGNAL PROCESSING CAMERA/RECORDER



High Sensitivity FIT CCD. Chroma Detail. Built-in Phantom Power. Lightweight/Low Power Consumption. 4-Channel Audio. Built-in Time Code Generator.

Panasonic

WJMX50/30 DIGITAL AV MIXER



Digital Special Effects, 287/108 Wipe Patterns, Wipe/Mix Section, Fade In/Fade Out, Down Stream Key, Color Correction, Audio Mixing Capability.

ALSO AVAILABLE WJAVE7



JVC GYX2BU PROFESSIONAL

One Piece Camcorder 3 CCD Camera with Full Size S-VHS Recorder Built-in, Very Low Light, 1 Lux, 13x or 17x Optional Lenses.

JVC

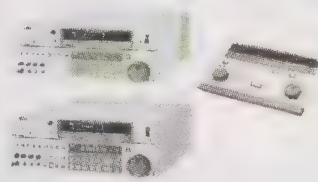
BR5622U/BR5822U RMG 860U PROFESSIONAL EDITING SYSTEM



S-VHS Insert and Assemble Editing. 4 Channel Audio, Optional Plug-in Time Code and TBC's, Self Diagnostic Warning System, Automatic Head Cleaning, On Screen Menu Display. Recorder Has Built-in Single Event Recorder.

JVC

EDIT DESK BR-S800U/BR-S500U/RM-G800U



Cost Effective S-VHS Edit System With Time Code. 4 Channel Audio. Heavy Duty Drive System. 32x Picture Search. Open Architecture for Future Expandability. Hottest System for 1995.

FREE!
Vidcomp "DOUBLES" Manufacturers Warranty
FREE!

ASK ABOUT OUR LEASE PROGRAM!!!

Non - Linear/Linear Computer Based Editing Systems



Desktop A/B Roll Editing Controllers. For IBM Compatibles, Mac and Toaster. Supports Entry-Level through Broadcast Equipment. Cut & Paste, Clean, Ripple, Sort and more. CMX File Conversion. Easy-to-use intuitive on-screen controls.

E.T.C.

TAO

Alladin

SANYO

MACKIE

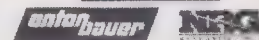
lowel Lights

FutureVideo

VIDEONICS

BATTERIES

TAPES



SONY 3M
Fuji AMPEX

USA (except S. FL)/Mexico/Canada Call 1-800-263-8180 Fax 1-800-833-1960 10998 Wilcrest, Houston, TX 77099
South Florida/South America Call 1-305-265-9339 Fax 1-305-265-1164 6303 Blue Lagoon Dr., Miami, FL 33126
Open Monday - Friday 9:00 a.m. - 6:00 p.m.

All merchandise shipped with manufacture supplied accessories. Extended warranties available on some products. We ship within one working day via UPS or Federal Express. Prices quoted over the phone are for mail order only. In store prices may be slightly higher. All prices quoted are F.O.B. Houston & all sales are final. Defective merchandise must be exchanged within 10 days of receipt of goods. Please call for exchange authorization. All prices are subject to change without notice. Vidcomp is an authorized GSA Supplier. Not responsible for typographical errors.

CIRCLE NO. 22 ON READER SERVICE CARD

BIG SCREEN
TVs



JVC



TUBE OR PROJECTION - THE BIGGEST TV
SCREENS AND THE BIGGEST SELECTION!



TOSHIBA

POWERSVIDEO HAS AN ALL STAR LINE-UP OF FRONT PROJECTION
SYSTEMS DELIVERING IMAGES UP TO 240 INCHES DIAGONALLY!

WE BRING HOME ENTERTAINMENT TO YOUR LIFE!

Panasonic INDUSTRIAL

Call us
today and
check
out our
large inventory of Panasonic
Industrial products.



HI-FI STEREO COMPONENTS

GREAT SOUND - GREAT DEALS from
Kenwood, Sony, & Technics including
tape decks, CD changers, surround
sound processors,
A/V receivers!
THX
DOLBY SURROUND
PRO-LOGIC

"The selection was great, they had everything I needed to complete
my Audio/Video System. I also purchased a Camcorder for my
brother's college graduation ceremonies. I not only got a great
deal—I received great advice and prompt service!"

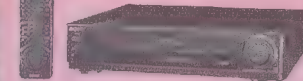


VCRs



JVC
Jog Shuttle with
Hi-Fi Stereo

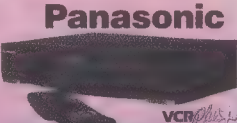
HR-S7100, HR-S5100, HR-VP720, HR-VP628, HR-VP624



SONY
Hi-Fi Stereo w/ Auto Clock Set
SV0-1410, SV0-1610



TOSHIBA
Hi-Fi Stereo
M-650, M-660, M-760



Panasonic
Hi-Fi Stereo
PV-S4580, PV-S4566, PV-4564, PV-4462

LASER DISC PLAYERS

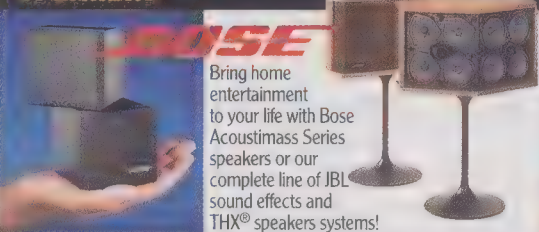
Powervideo has all the famous
brands in laser disc players at
the lowest possible prices.

ACCESSORIES



The ultimate
accessory
connection
for chargers,
tripods,
lights, filters,
lenses, micro-
phones, soft and hard cases,
under water housings, tapes,
cables, surge
protectors and
much more!
HIGH QUALITY
A/V CABLES

SPEAKERS



Bring home
entertainment
to your life with Bose
Acoustimass Series
speakers or our
complete line of JBL
sound effects and
THX® speakers systems!

EDITING

A great
combination: NEW A/V Editor
& NEW AB-1 Edit Console
with the TM 2000 Titler!

Panasonic
A new star combination:
WJ-AVE7,
and the
WJ-AVE1 Titler

LARGEST AUTHORIZED
DEALER IN NORTH AMERICA
FOR ALL PRODUCTS WE SELL!

All products are factory sealed -
no demos or refurbished goods.

Overnight service also available.

No surcharge for check, money
order, C.O.D. or Credit Card.

All quoted prices are for mail order only



CAMCORDERS

SONY

PAL/SECAM
System

Hi8

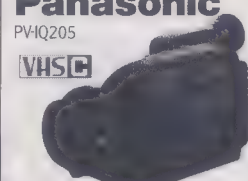


NEW 4" LCD VIEWFINDER!

Panasonic

PV-HQ205

VHS



All types of NEW Camcorders!

Canon

L2



We
carry
ES-550,
ES-600,
ES-80, & ES-2000

JVC

GR-SZ7



Choose from NEW
GR-AX700, GR-AX800, & GR-AX900

HITACHI

VM-H71



Call for VM-E410,
VM-E510, VM-H59, VM-H71

ASK ABOUT OUR 2, 3 AND 5 YEAR EXTENDED SERVICE CONTRACT WITH MAINTENANCE

POWERSVIDEO

A DIVISION OF VIDEOLAND, INC.

1-800-877-2900

Customer Service: 713-772-4400 • Fax: 713-772-6500

6808 Homewood Drive, Houston, Texas 77074 • Open M-F 8:30am - 7:00pm; SAT 10am - 5pm; SUN 12 noon - 5pm (CST)

Tel: 1-800-578-5253

UNCLE'S STEREO

NEW YORK'S ORIGINAL ELECTRONICS DISCOUNTER

Fax: 1-212-343-9142

RECEIVERS

YAMAHA RXV690 80Wx3 + 25Wx2 . . . \$519
YAMAHA RXV590 75Wx3 + 20Wx2 . . . \$399
CARVER FULL LINE CALL BEST PRICE!
NAD AV716 A/V Pro Logic . . . CALL!
NAKAMICHI RE3 Audiophile . . . \$319
TECHNICS SATX-1010 New THX . . . \$749
TECHNICS SAGX-190 100Wx2 . . . \$199
ONKYO TXSV-525 Pro Best Choice . . . \$406
SONY STRGX800ES 90Wx3 + 30Wx2 . . . \$528
SONY STRGX900ES 100Wx3 + 30Wx2 . . . \$639
CALL FOR MANY, MANY MORE!

MINI SYSTEMS

DENON D-700 Best Mini System . . . CALL!
YAMAHA CC-90 3CD Changer . . . CALL!
AIWA NSX-V70 100W + 100W . . . \$419
AIWA NSX999 120W x 2 . . . \$459
AIWA NSXD858 Dolby Pro Logic . . . \$699

CASSETTE DECKS

SONY TCWR665 Pitch Control . . . \$269
NAKAMICHI FULL LINE IN STOCK CALL!
SONY TCWA9ES Dual Record . . . \$649
YAMAHA KXW282 Best Buy . . . \$199
AIWA ADS-950 Dolby "S" . . . \$299
TECHNICS RSTR575 Double Deck . . . \$199

CD PLAYERS

TECHNICS SLPD987 Pitch Control . . . \$199
TECHNICS SLPD1010 MASH . . . \$229
NAD 513 3 Disc Carousel . . . \$289
ONKYO DXC220 5 Disc Carousel . . . \$239
YAMAHA CDC555 5 Disc Changel . . . CALL!
YAMAHA CDC755 5 Disc Changel . . . \$299
NAKAMICHI FULL LINE IN STOCK CALL!
DYNACO CDV1 Vacuum Tube CD . . . CALL!
SONY CDPCA9ES 5 Disc Carousel . . . CALL!
SONY CDPCA7ES 5 Disc Carousel . . . \$259
SONY CDP365 Play & Change . . . \$199

PROFESSIONAL TAPES

AMPEX 489DM126 ADAT . . . \$9.75
3M R60 DAT . . . \$4.99
DIC HQ30 DAT . . . \$3.99
3M R46 DAT . . . \$4.49
DIC HQ120 DAT . . . \$5.49
SONY DT120 DAT . . . \$7.75
DIC 4-2.0GB 3 Hour . . . \$6.99
AMPEX DDS490 3 Hour . . . \$10.99
SONY BCT20M Betacam SP . . . \$18.50
FUJI BCT30M Betacam SP . . . \$21.50
3M BC60ML Betacam SP . . . \$28.50
AMPEX 499 2" Reel . . . \$129.00
AMPEX 456 2" Reel . . . \$118.00

SPEAKERS

ADVENT HERITAGE Tower Spkr . . . \$418
CELESTION FULL LINE BEST PRICE!
BIC-VENTURI V52SI Book Shelf . . . CALL!
CAMBER LS7 Audiophile Speakers . . . \$499/pr
JBL THX System . . . IN STOCK
PINNACLE AC650 Best Rated . . . CALL!
ADS ALL MODELS IN STOCK CALL!
VELODYNE ALL MODELS CALL!
KEF ALL MODELS IN STOCK CALL!

DAT DECKS

JVC XPD1 PRO Portable . . . CALL!
SONY DTC60ES Home DAT . . . CALL!
SONY DTC790 Home DAT . . . \$659
PANASONIC FULL LINE IN STOCK!
TASCAM ALL MODELS CALL BEST PRICE!
SONY MDS302 Mini Disc Recorder . . . CALL!

CONSUMER TAPES

TDK D60 Audio Cassette . . . \$0.65
MAXELL UR90 Audio Cassette . . . \$0.75
TDK SA60 Audio Cassette . . . \$1.29
SONY HF120 Audio Cassette . . . \$1.35
MAXELL XLI190 Audio Cassette . . . \$1.39
MAXELL XLI1560 Audio Cassette . . . \$1.69
TDK SAX90 Audio Cassette . . . \$1.89



Ask About Our
Exclusive
Satisfaction
Guarantee!!

New York's Largest
Blank Tape Dept.!

UNCLE'S STEREO

Everything In Electronics For Less!

581 Broadway,
New York, NY 10012
212-343-9111
Fax: 212-343-9142
Mon-Sat 10-7 Sun 11-5:30

216 West 72 St.,
New York, NY 10023
212-721-7500
Fax: 212-721-7587
Mon-Sat 10:30-7:30 Sun 11-5:30

International &
Canadian Orders
Welcome!

Not responsible for typographical
errors. All prices subject to change
without notice. Shipping is non-
refundable. A restocking fee may
apply on returns. Consumer Affairs
Lic. # 0904318
© 1995 Uncle's Stereo Inc.



**CAMERA
WORLD
OF OREGON**

CALL
TOLL FREE

1-800-695-8443

CUSTOMER SERVICE
Mon - Fri. 9am - 5pm (PST)
(503) 227-6008
FAX: (503) 222-7070



CAMERA WORLD IS THE NATION'S LARGEST CANON VIDEO DEALER!



OPEN 7 DAYS A WEEK!

MONDAY-FRIDAY: 6am-7pm

SAT: 6am-6pm • SUN: 8am-5pm
Mail Order Division Hours Only, Pacific Standard Time

ALL EQUIPMENT IS BRAND NEW & FULLY GUARANTEED

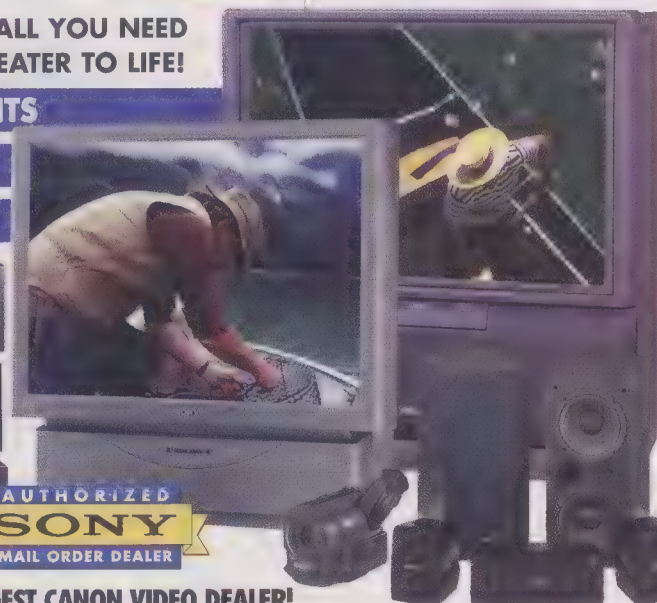
FedEx
Ask About
DELIVERY IN A FLASH!

YOUR SOURCE FOR ALL YOU NEED
TO BRING HOME THEATER TO LIFE!

HI-FI COMPONENTS

BIG SCREEN TVs

SPEAKERS



AUTHORIZED
SONY
MAIL ORDER DEALER

SONY • PIONEER • JVC •
JBL • KLH • TOSHIBA •
HARMAN / KARDON •
AIWA • CANON • NIKON •
MINOLTA • OLYMPUS

CAMERA WORLD FREE!
OUR NEW
1995-96
CATALOG
IS NOW
AVAILABLE!

24 HOUR CATALOG HOT LINE
1-800-729-8940
CALL US TOLL-FREE



THE NATION'S LARGEST CANON VIDEO DEALER!

THE CAMERA WORLD BUILDING • 500 SW 5TH AVE • PORTLAND, OR 97204

CIRCLE NO. 47 ON READER SERVICE CARD



WHEN IN NEW YORK...MAKE US A PART OF YOUR NEW YORK EXPERIENCE.

RETAIL STORE:

120 West 31 Street (Between 6th & 7th Avenues) New York, NY 10001 • 212-564-3592

NO SURCHARGE ON CREDIT CARDS



GUARANTEE: Merchandise exchanged or money refunded if returned in original condition within 10 days of receipt with invoice copy, original packing & blank warranty card.

HOURS: Mon-Thurs 9-6, Fri 9-2, Sun 10-5, Closed Sat

All Merchandise Brand New with Warranty • Prompt Delivery • Inquire about Next Day Delivery

PHOTO AND ELECTRONICS

Mail Order: 120 West 31st Street, New York, NY 10001-3485

NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS *** PRICES SUBJECT TO SUPPLIERS PRICING.

ORDER TOLL-FREE: 800-223-7323 • IF TOLL-FREE # IS BUSY: 212-947-5290 • CUSTOMER SERVICE: (Mon-Thurs: 9:30-5:30 • Fri: 9:30-1:30) 800-882-2802 or 212-947-5295

CAMCORDERS AND VCR'S

ATTENTION VIDEO SHOPPERS!

We carry a tremendous stock of Camcorders, VCR's & accessories in stock at unbelievably low prices! If you need assistance in making your selection, our qualified sales staff will be more than happy to advise and assist you!

Panasonic. PROLINE HEADQUARTERS

We carry the Full Panasonic AV Line. Call For Prices!

AG-DP800 Supercam Kit

AG-188

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

AG-4540P

SONY

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

CCD-FX 230

PAL VIDEO

SONY

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

CCD-TR35

VIDEO ACCESSORIES

simon

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

SCG Screenwriter

COLONEL VIDEO & AUDIO

HOURS: Monday - Saturday 8 am to 9 pm Sundays 10 am to 6 pm (CST)
24-Hour Order Processing-Friendly, Honest, Knowledgeable Staff - No Sales Tax Outside Texas!

AUTHORIZED DEALER



New Models
Arriving Daily!!
Call for Models
Not Shown &
Today's Prices!!

1-800-423-VCRS

Orders Only

1-800-VIDEO-97
Repeat Callers

(713) 486-8086
Customer Inquiries
and Service

MAIL ORDER
FINANCING AVAILABLE

(713) 486-8300
24 Hour Fax Line

JVC



VHS-C Camcorders
GR-SZ29 GR-AX700
GR-AX900 GR-AX350
GR-AX800 GR-AX200

8 mm Camcorders
VM-E310A VM-H71A
VM-E410A VM-H81A
VM-E510A

Video Recorders

HR-A41U HR-VP628U
HR-A61U HR-VP720U
HR-J420U HR-VP820U
HR-J620U HR-SS100
HR-VP624 HR-S7100

Video Editing

JXS55 JXT88
JXT66 JXT00

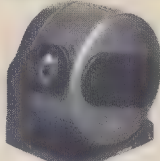
SHARP

VL-L390 VLE-43U
VLH-420U VLE-47U
VLH-450U



JVC SONY PROSCAN
HITACHI TOSHIBA
3" to 41" Color Televisions
Big Screen Projection TVs
TV/VCR Combinations &
LCD Projection!
WE SHIP NATIONWIDE!
CALL RICK @ EXT.384
FOR ALL YOUR TV NEEDS!

NV-55BX4



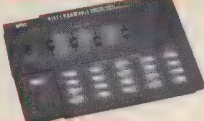
LCD PROJECTORS!

TELEVISION SPECIALISTS!

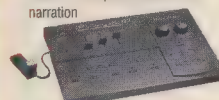
SONY

Authorized Sony
Dealer
Video Camcorders
VCRs Bookshelf Hi-Fi
Systems Telephones
Boom Boxes Mini
Discs World Band
Radio Watchman
Portable TV Big
Screen Trinitron
Home Theater
Hi-Fi Components

SIMO



**Special Effects
Generator SFX-5**
Easy multi-source mixing. Special
effects like strobe, play and freeze
frame. Microphone included for
narration



**Special Effects
Controller SFXL**
Easy editing at your fingertips. Use
any 3 control-L capable camcorder
or VCR and assemble up to 46
scenes on one tape! Three channel
audio mixer with microphone lets you
mix in music or your voice.

Canon



ES500 L2
ES600 ES-800
ES2000 ES-1000

We Carry All Accessories!

RCA

8 mm Camcorders
Pro-809 Pro-883HB
Pro-845 Pro-930

VHS Camcorders
CC-413 CC-600
CC-547 CC-740

Video Recorders
VR-503 VR-721
VR-507 VR-720HF
VR-603 VR-800HF
VR-674

Panasonic



Full Line Panasonic Dealer

AG-456
SVHS-1LUX-12X ZOOM



AG-1970
SVHS/VHS
AG-1290 CT-1383VW
AG-513A CT-1384VY
AG-5700 WJKB15
AG-520A WJMX30
AG-A96 WJAVE7
VW-CG5P WJKB15

PAL/SECAM MULTI-SYSTEM

WE CARRY ALL NTSC MODELS IN
PAL/SECAM

SONY Panasonic



Sony CCDTR2000
Hi8, color viewfinder, optical
stabilizer and RC time code!



AGW-1
Industrial multi-system deck
converts to/from
any format!

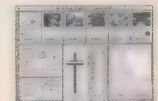
MANY OTHERS NOT SHOWN!

DESKTOP EDITING

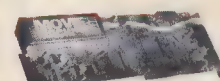
Call Charles @ Ext.345 for
all your Desktop
& Industrial needs!

FAST

FAST MOVIE LINE



FAST VIDEO
MACHINE LITE



FutureVideo

EC1000 PRO MkII
Stand alone cuts-only,
control track edit con-
troller!

EC1000PRO/TC MkII
Same as above PLUS-a
built-in SMPTE time code
reader!



Professional Editing
Equipment In Stock!

CAMCORDER ACCESSORIES

Replacement Batteries, Tripods,
Microphones, Wireless
Microphones, Video Lights,
External Batteries, Editors,
Processors and Much More!



GLIDECAM

Glidecam 3000 PRO
Handles
Up to 10
Pound
Camera!

CELLULAR PHONE ACCESSORIES



DOLBY SURROUND AC-3 IS HERE!

**DOLBY SURROUND AC-3--The Latest
Development in Surround Sound For Movies!**

RECEIVERS
130 Watt AC-3 Pro Logic
Digital sound field control by DSP!
5-channel accurate imaging System!



PIO VSD3S

**COMBINATION CD/LASER
DISC PLAYERS**
60% sharper than an ordinary VCR!
425-line horizontal resolution!
Digital sound capability!
Digital video processing!
And much more!



PIO CLDD704



PIO CLDD604



PIO CLDD504

Apply today for your very own
Colonel Video and Audio Gold Card!

Purchase Orders, COD's and Personal Checks Welcome

UNBEATABLE PRICES

Defective exchanges may be made within 7 days of receipt after prior authorization. All returned merchandise must be in new condition and include packaging and printed material in original unaltered conditions. Returns may be subject to a restocking fee. Shipping and handling charges non-refundable. We are not responsible for typographical errors. Shipping and handling is extra. These are phone and mail order prices only. Prices are not valid in the showrooms or to the customers within a 150 mile radius. If you wish to drive to the stores, please phone ahead to check the in-store price. *Ask for details. Colonel Video and Audio, 16451 Space Center Blvd., Houston, TX 77056

Protect your investment on all your electronic equipment today! Ask us for details about our fast and convenient 1-5 Year Warranty Programs

CIRCLE NO. 21 ON READER SERVICE CARD

"SHOPPING WITH US IS AS PLEASANT AS A WALK IN THE PARK"

MARINE PARK

CAMERA & VIDEO INC.

BUSINESS HOURS

Mon-Thurs 9:30am to 8:00 pm
Friday 9:30am to 4:00pm
Closed Saturdays
Sunday 10:00am-7:00pm
3126 AVENUE U
BKLYN, N.Y. 11229



1-800-448-8811

INQUIRIES ON ORDERS PLACED ALREADY **ONLY**
TOLL FREE 1-800-360-1722

LOCAL & OVERSEAS CALL
718-891-1878



WE ACCEPT ALL MAJOR CREDIT CARDS WITH NO SURCHARGE!

WE SHIP WORLDWIDE! OVERNIGHT SHIPPING AVAILABLE!

SONY

Special Offer: To extend your warranty coverage to 3 years, add an additional \$199.99 to any listed camcorder price.

CCD-TR400
COLOR VIEWFINDER
IMAGE STABILIZER
STEREO HANDYCAM OPTICAL IMAGE STABILIZATION COLOR VIEWFINDER
\$729.99

CAMCORDERS

CCD-TR23	479.99
CCD-TR30	479.99
CCD-TR33	499.99
CCD-TR73	559.99
CCD-TR83	609.99
CCD-TR93	679.99
CCD-TR100	679.99
CCD-TR600	839.99
CCD-TRV30	899.99
CCD-TRV40	899.99
CCD-TRV70	1329.99
CCD-VX3	2549.99
CCD-TR3000	CALL
CCD-FX230	459.99
CCD-FX330	469.99
CCD-FX430	479.99
CCD-FX530	519.99
CCD-FX630	534.99
CCD-FX730V	644.99
CCD-SC5	569.99
CCD-SC6	CALL

CCD-TR700
HI-8MM COLOR VIEWFINDER
IMAGE STABILIZATION, PC TIME CODE
\$1039.99

CCD-TRV30
STEREO HANDYCAM OPTICAL IMAGE STABILIZATION COLOR VIEWFINDER
\$699.99

CCD-TRV70
IMAGE STABILIZATION
12X1 ZOOM LENS
\$1329.99

CALL FOR PAL SYSTEMS

HITACHI

VM-E58A
CALL

COLOR VIEWFINDER, STABILIZATION, 24:1 ZOOM

VM-H16A	CALL
VM-H38A	CALL
VM-3800A	CALL
VM-H710A	CALL
VM-2800A	CALL
VM-E510A	CALL
VM-1800A	CALL
VM-E410A	CALL
VM-H59A	CALL
VM-E301A	CALL
VM-E110A	CALL

Panasonic

CALL FOR LATEST PANASONIC MODELS

VHS-C

PV-54	819.99
PV-564	1009.99
PV-10205	479.99
PV-10305	499.99
PV-10405	559.99
PV-10505	609.99
PV-0705	819.99

AG-456
HI-8MM COLOR VIEWFINDER
IMAGE STABILIZATION, PC TIME CODE
\$1639.99

FULL SIZE VHS

PV-910	499.99
PV-940	459.99
PV-960	509.99
PV-980	579.99
PV-9770	919.99

PV-10505
HI-8MM COLOR VIEWFINDER
IMAGE STABILIZATION, PC TIME CODE
\$609.99

PROFESSIONAL INDUSTRIAL LINE

NEWAG-456
AG-455
AG-196
AG-195
AG-188
AG-187
AG-3
AG-DP600 3 Chip Supercam
CALL

VCRS

AG-W1	1489.99
AG-5700	1174.99
AG-1970	1094.99
AG-1250	209.99
AG-1090	CALL
WJ-MX50	CALL
WJ-MX30	1749.99
WJ-AV7	819.99
WJ-AV65	769.99
WJ-TTL7	259.99
AG-A96	349.99
CT-1384V	254.99
CT-1384V	289.99

JVC

GR-AX 900
\$649.99

JVC PROFESSIONAL

GR-S29	CALL
GR-S27	969.99
GR-AX 700	509.99
GR-AX 800	569.99
GR-AX 350	519.99

SR-S360 Super VHS VCR
BR-S375U Super VHS VCR
TM-900 SU Monitor
TM-9U Monitor
TM-120 SU Monitor

SHARP

ES 2000
20x Optical Zoom
Flexizone AF
Hi-Resolution
Color Viewfinder
CALL

WE CARRY A FULL LINE OF CANON ACCESSORIES

VL-H410U	1349.99
VL-E32U	589.99

Canon

PRO 942
CALL

CC-620
CALL

Nikon

VN-400

VIDEO

Reader Service Card

VIDEO

Reader Service Card

Please circle product numbers to receive desired information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195

- What size is your primary viewing TV?
A ☐ 20"-25" B ☐ 25"-27" C ☐ 27"-32" D ☐ 35"+
- Approximately how many hours per day do you watch TV?
E ☐ 0-2 F ☐ 3-5 G ☐ 6-10
- How far in advance do you plan your TV viewing?
H ☐ 1 hour I ☐ 1 day J ☐ 1 week K ☐ No Planning
- Do you tape "series" programming (i.e. soap operas, mini-series)?
L ☐ Yes M ☐ No
- Which sources do you use to plan TV viewing?
N ☐ Daily Newspaper O ☐ Cable Guide P ☐ Weekly Newspaper Insert
Q ☐ TV Guide R ☐ Other
- How many programs do you tape per week?
S ☐ 1-5 T ☐ 5-7 U ☐ 7+
- If programming your VCR was made easier would you record additional shows? V ☐ Yes W ☐ No
- Are you currently a subscriber to VIDEO? X ☐ Yes Y ☐ No

999 ☐ Please send me 10 issues (1 year) of Video Magazine for \$17.94 and bill me.

Name _____
(please print)

Address _____

City _____ State _____ Zip _____

Telephone Number (with Area Code) _____

Allow 6-8 weeks for delivery. Card expires 2/29/96 VM11951

Please circle product numbers to receive desired information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195

- What size is your primary viewing TV?
A ☐ 20"-25" B ☐ 25"-27" C ☐ 27"-32" D ☐ 35"+
- Approximately how many hours per day do you watch TV?
E ☐ 0-2 F ☐ 3-5 G ☐ 6-10
- How far in advance do you plan your TV viewing?
H ☐ 1 hour I ☐ 1 day J ☐ 1 week K ☐ No Planning
- Do you tape "series" programming (i.e. soap operas, mini-series)?
L ☐ Yes M ☐ No
- Which sources do you use to plan TV viewing?
N ☐ Daily Newspaper O ☐ Cable Guide P ☐ Weekly Newspaper Insert
Q ☐ TV Guide R ☐ Other
- How many programs do you tape per week?
S ☐ 1-5 T ☐ 5-7 U ☐ 7+
- If programming your VCR was made easier would you record additional shows? V ☐ Yes W ☐ No
- Are you currently a subscriber to VIDEO? X ☐ Yes Y ☐ No

999 ☐ Please send me 10 issues (1 year) of Video Magazine for \$17.94 and bill me.

Name _____
(please print)

Address _____

City _____ State _____ Zip _____

Telephone Number (with Area Code) _____

Allow 6-8 weeks for delivery. Card expires 2/29/96 VM11952

CANON NIKON MINOLTA PENTAX VITEX FUJIFILM SONY JVC PANASONIC SHARP HITACHI

COLONEL VIDEO & AUDIO

HOURS: Monday - Saturday 8 am to 9 pm Sundays 10 am to 6 pm (CST)
24-Hour Order Processing-Friendly, Honest, Knowledgeable Staff - No Sales Tax Outside Texas!

AUTHORIZED DEALER



**New Models
Arriving Daily!!
Call for Models
Not Shown &
Today's Prices!!**

1-800-423-VCRS

Orders Only

1-800-VIDEO-97
815-7897
Repeat Callers

(713) 486-8866
Customer Inquiries
and Service

MAIL ORDER
FINANCING AVAILABLE

(713) 486-8300
24 Hour Fax Line

JVC



VHS-C Camcorders

GR-SZ29 GR-AX700
GR-AX900 GR-AX350
GR-AX800 GR-AX200

8 mm Camcorders

VM-E310A VM-H71A
VM-E410A VM-H81A
VM-E510A

Video Recorders

HR-A41U HR-VP628U
HR-A61U HR-VP720U
HR-J420U HR-VP820U
HR-J620U HR-SS100
HR-VP624 HR-S7100

Video Editing

JXS55 JXT88
JXT66 JXT00

SHARP

VL-L390 VLE-43U



VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

VL-L390 VLE-43U

SONY

Authorized Sony
Dealer
Video Camcorders
VCRs Bookshelf Hi Fi
Systems Telephones
Boom Boxes Mini
Discs World Band
Radio Watchman
Portable TVs Big
Screen Trinitron
Home Theater
Hi fi Components

Canon

SIMA



Special Effects Generator SFX-5

Easy multi-source mixing. Special effects like strobe, play and freeze frame. Microphone included for narration



Special Effects Controller SFXL

Easy editing at your fingertips. Use any 3 control-L capable camcorder or VCR and assemble up to 46 scenes on one tape! Three channel audio mixer with microphone lets you mix in music or your voice.

PAL/SECAM MULTI-SYSTEM

WE CARRY ALL NTSC MODELS IN
PAL/SECAM

SONY

Panasonic



Sony CCD2000

Hi8, color viewfinder, optical stabilizer and RC time code!

MANY OTHERS NOT SHOWN!



AGW-1

Industrial multi-system deck converts to/from any format!

Call Ed @ Ext.347 for all your PAL/SECAM needs!

DESKTOP EDITING

Call Charles @ Ext.345 for all your Desktop

CAMCORDER ACCESSORIES

Replacement Batteries, Tripods, Microphones Wireless

VIDEO
P.O. BOX 10161
RIVERTON NJ 08076-0161

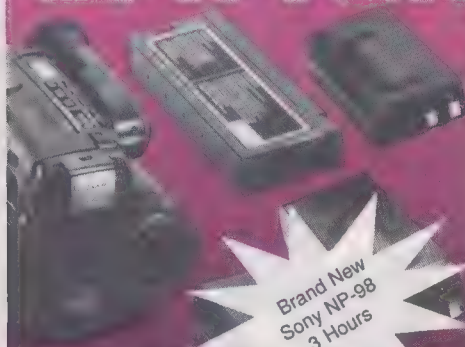
VIDEO
P.O. BOX 10161
RIVERTON NJ 08076-0161

PLACE
STAMP
HERE

PLACE
STAMP
HERE

MEMORY FREE CAMCORDER REPLACEMENT BATTERIES/CHARGERS

24 Hour Shipping • Lowest Prices • Longest Run Time



Brand New
Sony NP-98
3 Hours

SALE

Sony Sale

Original Sony Brand
NP-500H Lithium Ion NP-98
7.2V @ 1200mAh 6V @ 3000mAh
\$54.00 \$64.00

RAPID CHARGER / DISCHARGER

(Sakar Brand) for any Sony Battery
Can use in house or car
Discharges and charges in one automatic cycle.
\$39.00

SALE

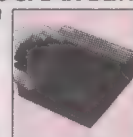
PANASONIC PB50 Orig. PAN.....	\$45.00
PANASONIC PB80/88 Orig. PAN.....	\$39.00
SONY NP77H 2400 mah.....	\$39.00
SONY 8mm 1500 mah.....	\$26.00
CANON 8mm 2000 mah.....	\$33.00
PALMCORDER 2000 mah.....	\$33.00
JVC GR-C9 Type C.....	\$36.00
SHARP BT 21/22.....	\$45.00
SHARP BT 70/80 2400 mah.....	\$39.00
RCA/HITACHI 8 mm 2400 mah.....	\$39.00

RAPID CHARGERS CAMCORDER CHARGER/DISCHARGER



6V, 7.2V, 9.6V runs from house or auto.
1 hr. time for Sony, Canon, Panasonic, RCA/Hitachi & most other brands

Charges 1 battery \$44
Charges 2 batteries \$69



NEW External Powerpac+

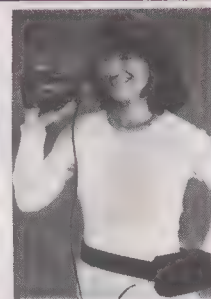
5 to 7 hours of recording time.

Powerpac+ includes:

- 6volt @ 10 amps sealed lead acid battery.
- Heavy duty pouch and belt.
- A charger for charging at home (optional charging cord for car).
- An adaptor of your choice.
- 12 volt @ 7 amps \$95



\$85



BATTERY TECH, INC.

28-25 215TH PLACE, BAYSIDE, N.Y. 11360 • FAX: 718-631-5117

800-442-4275



CIRCLE NO. 6 ON READER SERVICE CARD

THE ELECTRONIC MAILBOX

THE VIDEO EDITING & PRODUCTION EXPERTS



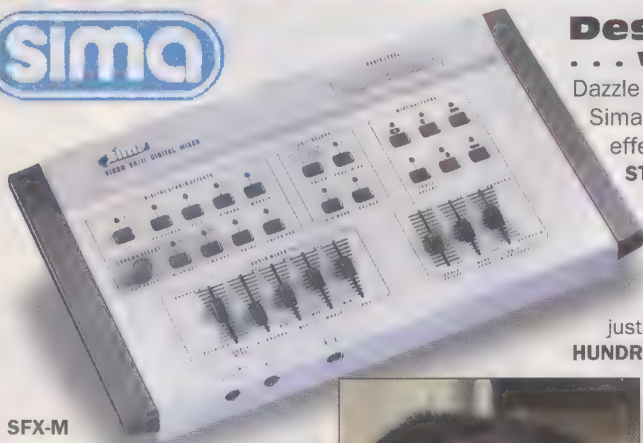
800-323-2325

WE KNOW OUR STUFF

Staff of courteous, informative, sales professionals

10 DAY MONEY BACK 30 DAY TRADE-IN GUARANTEE POLICY

10-12 Charles St, Glen Cove, NY 11542 FAX 516-671-3092 • TECH ADVICE HOTLINE 516-759-1943



SFX-M

Desktop Video Effects ... without the computer!

Dazzle your friends & family with Hollywood type special effects. Sima's fabulous new SFX-M gives you all of these digital video effects at a very affordable price:

STUDIO STYLE TRANSITIONS AND EFFECTS

Dual Time Base Correctors (TBC) provide true dissolves and A/B wipes from one moving picture into another. Two moving pictures can also be simultaneously displayed.

REAL BLUE-SCREEN CHROMA KEY

The blue key superimposes you onto any moving background image—just like the TV weather man. Put yourself into your favorite movies!

HUNDREDS OF DIGITAL SPECIAL EFFECTS

Create hundreds of different, exciting combinations with STILL, three STROBE SPEEDS, two PAINT levels, three MOSAIC levels, and COLOR NEGATIVE

HUNDREDS OF COLORFUL WIPES AND FADES Combine wipes and fades with special effects to create a virtually unlimited palette of transitions. Adjustable wipe angle and wipe edge

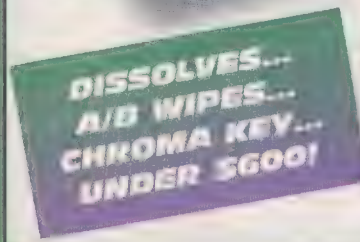
EASY TO SET-UP AND FUN TO USE Two inputs/outputs with separate monitor jacks. Works with all formats including S-VHS & Hi8.

BUILT IN STEREO AUDIO MIXER.

Model # SIMA SFX-M
Introductory Special **\$599⁰⁰** (Reg. \$799)

Deluxe gold tipped S-VHS Cable Kit **\$29.95**

Sale expires
12/31/95



new west electronics

-a division of Clarity Electronics LTD. • 4120 Meridian Bellingham, WA 98226 • fax (360) 734-3314-

**We are America's
#1 audio/video
source!**

**HOME THEATER & AUDIO
INDUSTRIAL & CONSUMER
CAMCORDERS, VCRs
AND EDITING GEAR**

**ACCESSORIES • MONITORS • TAPE
TVs • BIG SCREENS • DSS • LASERDISC
AUDIO SEPARATES • VIEWCAM & MORE!**

**ALL PRICES INCLUDE
FEDERAL EXPRESS DELIVERY**

GREAT PRICES • EXCELLENT SERVICE

We proudly feature:

**PANASONIC • SONY • JVC • HITACHI • SHARP • CANON
RCA • TOSHIBA • VIDEONICS • PIONEER • B&K • FUJI
KENWOOD • JBL • BOGEN • LOWELL • AZDEN • INFINITY
AND MUCH MORE!**

FedEx

**CODs & POs
WELCOME!**



ALL TIMES PST: M-F 6:30A to 6:30P/SAT 7:00A to 6:00P/SUN 8:00A to 5:00P

800-488-8877

MOST ITEMS CARRY A 30 DAY DEFECT EXCHANGE. NON-DEFECTIVE ITEMS CAN BE RETURNED WITHIN 30 DAYS. ALL NON-DEFECTIVE PRODUCT SUBJECT TO A RESTOCKING FEE THAT WILL RANGE FROM 5-15%. CALL FOR DETAILS.

CIRCLE NO. 13 ON READER SERVICE CARD

**DON'T
MISS
THIS
AWESOME
DEAL!**

SPECIAL OF THE MONTH!

NEW

**Canon
ES5000**

Eye Controlled Camcorder



features include:

- **Exclusive Eye Controlled Auto Focus**
(The ES5000 will focus wherever the user looks within the viewfinder frame!)
- **Eye Controlled Switches**
(Many of the ES5000's functions can be operated by a simple glance at an eye controlled switch that appears in the viewfinder!)
- **Hi 8mm with Hi Fi Stereo Audio**
- **40X Zoom**
- **High Resolution Color Viewfinder**
- **Optical Image Stabilization**
- **11 Digital Effects (6/Effects & 5/Mixes)**
- **Ergonomically Correct Design**

**CALL NOW FOR A GREAT DEAL
ON THIS
REVOLUTIONARY NEW
CAMCORDER!**

**Looking for Specials, Deals and lots of
useful info? Check out
NEW WEST ON THE NET:
<http://www.newest.com>**



PRE-CHRISTMAS SALE!

Save on cable rental fees!

**CABLE TV
DESCRAMBLERS
WE'LL BEAT
ANY PRICE!**

**CALL TOLL-FREE
1-800-284-8432**

**COMPATABLE REPLACEMENTS
FOR MOST MAJOR SYSTEMS**

24 HOUR SHIPMENTS!

QUANTITY DISCOUNTS!

30 DAY MONEY BACK GUARANTEE!

Mastercard • American Express • Visa • C.O.D.

HAVE MAKE AND MODEL NUMBER OF EQUIPMENT USED IN YOUR AREA

1-800-284-8432

FOR ORDERS ONLY

For technical & customer service: 305-749-3122

ALL SHIPPING & HANDLING FEES AT CUSTOMER'S EXPENSE

Anyone implying theft of service will be denied assistance.

CABLE WAREHOUSE

10117 WEST OAKLAND PARK BLVD., SUITE 315, SUNRISE, FL 33351

NO FLORIDA SALES

TIPS FOR MAIL ORDER PURCHASERS

It is impossible for us to verify all of the claims of advertisers, including product availability and existence of warranties. Therefore, the following information is provided for your protection.

1. Confirm price and merchandise information with the seller, including brand, model, color or finish, accessories and rebates included in the price.
2. Understand the seller's return and refund-policy, including the allowable return period, who pays the postage for returned merchandise, and whether there is any "restocking" charge.
3. Understand the product's warranty. Is there a manufacturer's warranty, and if so, is it from a U.S. or foreign manufacturer? Note that many manufacturers assert that, even if the product comes with a U.S. manufacturers warranty card, if you purchase from an unauthorized dealer, you are *not* covered by the manufacturer's warranty. If in doubt, contact the manufacturer directly. In addition to, or instead of, the manufacturer's warranty, the seller may offer its own warranty. In either case, what is covered by warranty, how long is the warranty period, where will the product be serviced, what do you have to do, and will the product be repaired or replaced? You may want to receive a copy of the written warranty before placing your order.
4. Keep a copy of all transactions, including cancelled checks, receipts and correspondence. For phone orders, make a note of the order including merchandise ordered, price, order date, expected delivery date and salesperson's name.
5. If the merchandise is not shipped within the promised time or if no time was promised, 30 days of receipt of the order, you generally have the right to cancel the order and get a refund.
6. Merchandise substitution without your express prior consent is not allowed.
7. If you have a problem with your order or the merchandise, write a letter to the seller with all the pertinent information and keep a copy.
8. If you are unable to obtain satisfaction from the seller, contact the consumer protection agency in the seller's state or your local Post Office.

If, after following the below guidelines, you experience a problem with a mail order advertiser that you are unable to resolve, please let us know. WRITE TO Scott Constantine, Video Magazine, 45th floor, Hachette Filipacchi Magazines, Inc., 1633 Broadway, New York, NY 10019. Be sure to include copies of all correspondence.

PLANET ELECTRONICS

8418 LILLEY RD. CANTON, MICHIGAN 48187

WHERE YOUR SATISFACTION IS EVERYTHING!

CODE V195

NOBODY BEATS US!

SONY VCR's • TV's • AUDIO
CAMCORDERS • VIDEO PRINTERS

SONY

Panasonic

PANASONIC CAMCORDERS
AG455 AG195 AG3
EDITORS
WJMX30

VCR's
AG1290
AG1970
AGW1

FACTORY
AUTHORIZED
DEALER

SHARP
SHARP CAMCORDERS

FACTORY
AUTHORIZED
DEALER

Panasonic

PANASONIC VCR's
CAMCORDERS • TV's • EDITOR • VIDEO PRINTERS

Canon

WE STOCK ALL
THE CANON
CAMCORDERS

JVC

JVC VCR's
TV's • CAMCORDERS • CD's
AUDIO/VIDEO RECEIVERS
CASSETTE DECKS

FACTORY
AUTHORIZED
DEALER

FACTORY
AUTHORIZED
DEALER

GO.VIDEO GO.VIDEO
VIDEO DECKS • VHS • 8MM

Planet Has the Accessories You Need Too!

GoldStar
VIDEODECK
8MM TO VHS

RECOTON
900 MHZ SIGNALS

NADY
NADY PRO VIDEO
MIC's • HEADPHONES

CITIZEN

VIDEONICS

EDIT-SUITE • VIDEO MIXER
TITLE MAKER 2000 • THE EQUALIZER
SOUND EFFECTS BOX • THUMBS UP

CITIZEN

CITIZEN CAMCORDER MONITORS
LCD 3" COLOR MONITOR M329
LCD 4" COLOR MONITOR M938

**CAMCORDER
BATTERIES**
We Stock'em All.
Just Call!

FACTORY
AUTHORIZED
DEALER

bogen

BOGEN TRIPODS

3124 Dolly
3016 Monopod
3116 Mini
3140 Pro

FACTORY
AUTHORIZED
DEALER

SIMA

SIMA VIDEO EDITORS
TITLERS • LIGHTS
MIXERS • BATTERY
REFRESHERS

FACTORY
AUTHORIZED
DEALER

AT PLANET
WE
WELCOME
YOUR
PHONE CALLS!

Blank Tape

Maxell • Sony • TDK
JVC • Scotch • Fuji
All Formats! Call!

AZDEN

IMPROVE CAMCORDER PERFORMANCE
AZDEN LENS • REWINDERS • MIXERS

AZDEN VIDEO MIC's

FACTORY
AUTHORIZED
DEALER

Video and Audio, Planet's Got it All! Just Call!

BOSE
Better sound through research.

JVC

FACTORY
AUTHORIZED
DEALER

**PLANET
ELECTRONICS**

SONY

aiwa

Sherwood

800-247-4663

IN MICHIGAN CALL 1-313-453-4750

Call with an Order or Questions Today, and Ask for a Free Catalog!

NO CREDIT CARD FEES!

Master

VISA

DISCOVER

C.O.D.

VIDEO MAGAZINE™

For Advertising Information call 1-800-445-6066, 9am - 5pm EST

PLEASE NOTE: It is impossible for us to verify all of the claims of advertisers, including product availability and existence of warranties. To confirm that an advertiser is authorized to sell a product, we suggest you contact the manufacturer directly. Please review our *Tips for Mail Order Purchasers*.

AUTHORIZED

FRIENDLY ADVICE! FREE SHIPPING! CATALOG! PHILIPS, MIRAGE—MORE! TV'S, LASER DISC PLAYERS, VCR'S, CAMCORDERS. READ BROTHERS: (803) 723-7276.

MOVIES/FILMS/VIDEOS

1,000,000 VIDEOMOVIES/SOUNDTRACK LPS! Video catalogue-\$100. Descriptive catalogue-\$9.95. Soundtracks \$1.00. RTS/VE99, Box 93897, Las Vegas, Nevada 89193.

SPRING '95 RELEASES. Karate, ballet, family "portraits". Naturist videos. Catalog \$3. Natuurlijk, Box 5278VI, SM, CA 90409.

GM VIDEO PRESENTS: Party-time on the Colorado River during Spring Break, Memorial Day, Independence Day, Labor Day!!! Over 80 videos. Preview video (2hrs. & 30mins.): \$25. Catalog: \$1.00. Check/M.O. to: GM VIDEO, Dept. VI, POB 1339, Sedona, AZ 86339. Visa/MC: 1-800-829-1285.

RARE TV SHOWS! Programs from the 1940s through last night unavailable elsewhere! Call "The TV Connection" - (818) 709-8843

VIDEOS! Nudist, Adult, more! Exclusives! Super Discounts! Complete Catalog- FREE! F.P.(V), CP146F, Toronto, Canada, MAY-215.

Free Search Service: every title worldwide. Buy • Sell • Trade • Rent • Auction. Anytime: 1-800-849-7309; FAX: 1-770-227-0873.

BACKGROUNDS ON VIDEOTAPE! Most formats, \$99. Demo Available. 800.858.WAVE. Digital Wave Productions, Inc.

STOP PEEKING! Candid nude search (70 min). Intro. Offer \$15. "PEEPING TOM" Video Catalog \$3. U.T.S. Productions, 2124 Broadway, Ste 3268, NY, NY 10023

NINETEEN SENSUOUS AMATEUR PLAYMATES' VIDEO FROLIC. \$19.95. Odyssey, Dept. VI, POB 230902, Encinitas, CA 92023. Visa/MC: 1-800-755-6595. Free Catalog.

NUDE CONTESTS Videos. Glamour, Athletic, Amateur, Unisex. SASE. for Brochure. Classic Productions, Box 952, Dept. VI, Metairie, LA 70004.

AMATEUR NUDIST VIDEOS. Exclusives! Videotape sample: \$9.95. AMERICA PICTURES, Dept. V, 309 Judah, San Francisco, CA 94122. (415) 566-1212. Visa/MC.

THE MACABRE VIDEO—Underground Cult/Horror Obscurities. Taboo subjects. Catalog \$4.95. M.S.B., Route 1, Box 32, Apomattox, VA 24522.

NEW '95! NUDIST FAMILY CONTESTS. BEAUTY PAGEANTS/BODY PAINTING/FUN-DAY WATER-SPORTS. MEN/LADIES ALL AGES! COLORLOG \$3/SAMPLER \$20. GENESIS, BOX 5653, SANTA MONICA, CA 90409.

WEIRD FILMS. Thousands of Horror, Sci-fi, and exploitation films on VHS. Giant Catalog \$4.00 (Refundable). 2-Hour Video Sampler \$16.95. Visa/MC 1-(800)-859-9238. I.S.F., P.O. Box 28404 - V, Las Vegas, NV 89126.

SOCIAL NUDISM. Candid European videos. Rare family pageants. Catalog \$3. Nalfam(VV), Box 838, Venice, CA 90294.

BLANK TAPES

SONY "HI 8" METAL-P \$3.00 each

#P6-120HMPX 120 mins. USED TAPES. Bulk ordered. Includes storage box. 10/*28" • 100/*250" Money Back Guarantee • Quantities Limited • Calif. Orders add sales tax • S/H \$5.00 per order • NO COD

TOLL FREE 1-800-826-5432 MC, DS, V/S ALL ELECTRONICS CORP PO Box 567 - Van Nuys, CA 91408

DUPLICATIONS/CONVERSIONS

If you need Video Tapes Duplicated or Foreign Tapes Converted, call High-Tech Productions 1-800-662-8336.

SERVICES

VIDEOTOGRAPHY SERIOUS? FREE TELEVISION PRODUCTION MAGAZINE SUBSCRIPTIONS. SHOOTING, EDITING & EQUIPMENT FORMS: \$14.95. GRANT COOPER, P.O. BOX 90402, HONOLULU, HAWAII 96816.

FOR SALE

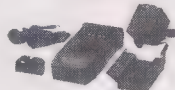
WHOLESALE CONNECTION

To Order Call 1-800-226-2800

Camcorders			VCR			Receivers			Home Speakers		
JVC			JVC			JVC			BOSE		
GRS29	Call	GRAX700	Call	HRV7100	Call	RX517	Call	RX85D	Call	AM3 II	Call
GRAX900	Call	GRAX200	Call	HR55100	Call	RX717	Call	RX95D	Call	AM5 II	Call
GRAX800	Call	GRAX350	Call	HRV7720	Call	RX817	Call	RX105D	Call	AM7 II	Call
CANON			CANON			TECHNICS			INFINITY		
ES2000	Call			HRV7628	Call	SAGX490	Call	SAGX790	Call	1S12	Call
SHARP			PANASONIC			SAGX690	Call	SATX1010	Call	100BK	Call
VL37	Call			PV54580	Call	PIONEER			PENNACLE		
VLE47	Call			PV54566	Call	VSX454	Call	VSXD704	Call	R5225	Call
VLE450	Call			PV4562	Call	VSX504	Call	VSXD903	Call	R5225	Call
PANASONIC			RCA			VSX604	Call	VSXD903	Call	R5225	Call
PVQ505	Call	PVQ305	Call	VR678	Call	KENWOOD			PENNACLE		
PVQ705	Call	PV950	Call	VR617	Call	KRV6070	Call	KRV8070	Call	AC500	Call
PVQ405	Call	PV940	Call	VR513	Call	KRV7070	Call	KRV1000	Call	AC600	Call
CALL FOR OTHER 8mm BRANDS			TOSHIBA			HARMAN KARDON			BIC		
Video Mixers				M781	Call	AVR30	Call	AVR20	Call	V52CLR	Call
VIDEONICS MX1	Call			M751	Call	AVR23	Call	FL8400	Call	V52SI	Call
VIDEONICS TM2000	Call			M671	Call	CALL FOR OTHER BRANDS			Powered Subwoofers		
VIDEONICS TU1	Call			M471	Call	CD Players			INFINITY		
Laser Discs			PIONEER			JVC			INFINITY		
RCR Available				CLDD504	Call	CLDD704	Call	CLDD504	Call	INFINITY	Call
DIGITAL SATELLITE SYSTEM				CLDD604	Call	CLDD5104	Call	CLDD504	Call	MTX	Call
DAT RECORDER			Portable CD Players			SONY			BIC		
PIONEER Home				D242CK	Call	D842K	Call		AIWA		
MINI DISC RECORDER				D245	Call	D844K	Call		KENWOOD		
Portable Home				D421	Call	D848K	Call		JVC		
KENWOOD				DPC341	Call	DPC651	Call		MXC220		
DPC451				DPC451	Call	DPC951	Call		MXC330		
Call For Brands & Model Not Listed			P.O.'s Welcome			CALL FOR OTHER BRANDS			AIWA		
24 HR. FAX (718) 997-6652			HRS: MON-SAT. 9 A.M.-6 P.M. Est. Prices subject to change. Prices exclude shipping & handling. Not responsible for typographical errors. MasterCard, Visa, American Express and C.O.D. accepted. Products come with W.C. Warranty. We ship UPS & FEDEX.			1-800-226-2800			NSXV10		
Wholesale Connection 63-48 108th St. Forest Hills, NY 11375									NSXV20		

For Sale like new SONY video projector 1042-Q. Yashica P810 8mm movie sound. Call Said after 5pm EST at (718) 274-4626.

NEW UNIVERSAL CAMCORDER BATTERY CHARGER and CONDITIONER!



Just \$48.95
Plus \$7.95 S/H
MC/Visa accepted

- * Quick charges in as little as 20 minutes
- * Fits virtually all camcorder batteries.
- * Discharges battery to eliminate "memory".
- * Charges nickel cadmium, nickel metal hydride, lead acid, lithium.
- * Works with 4.8/6/7.2/9.6/11.2 volt batteries.
- * AC/DC operation.



(800) 408-2020
23679 Calabasas Rd. #343
Calabasas, CA 91302

FRIENDLY PEOPLE AND EXPERT ADVICE!

ABC
American Buyer's Club
Home Theater Specialists
1-800-354-1324

ABC 130 HIGHWAY 33 • ENGLISHTOWN, NJ 07726

RECEIVERS			SPEAKERS			CD PLAYERS		
YAMAHA			BIC			DENON		
RX-V2090 & 890	CALL		ALL MODELS	CALL		DCM-560	CALL	
CARVER	CALL		BOSE	CALL		YAMAHA	CALL	
HR-605	CALL		AMS SL-AM7	CALL		CD-755	IN STOCK	
DENON	CALL		CELESTION	CALL		CD-655	CALL	
AVR2500 & 3000	CALL		MANY MODELS	CALL		NAD	CALL	
JVC	CALL		INFINITY	CALL		500	TOP RATED	
RX-817	379	SM25	SUBWOOFERS	CALL		517	TOP OF LINE	
KENWOOD	CALL		PURESOL	CALL		SONY	CALL	
KRV-100THX	CALL		MANY MODELS	CALL		CD-CPX151	100CD	
NAD	CALL		MIRAGE	CALL		NAKAMICHI	CALL	
AV-716	CALL		MANY MODELS	CALL		MB-1S	VIDEO	
NAKAMICHI	CALL		PSB	CALL		SONY	CALL	
AV-1	539	PSB	STRATUS GOLD	CALL		HITACHI	CALL	
ONKYO	CALL		ALPHA	CALL		YAMAHA	CALL	
RX-V319THX	CALL		PARADIGM	CALL		RCA	CALL	
SV-727PRO	IN STOCK		11SE II & TITAN	CALL		JVC	CALL	
SONY	CALL		PINNACLE	CALL		PIONEER	CALL	
STR-D101S	CALL		FULL LINE	CALL		CALL 800-780-6800		
SEPARATES			CASSETTES			CAR STEREO		
ADCOM	CALL		ONKYO	CALL		ADS-ALPINE-CLARION	CALL	
GPI 800	CALL		NAKAMICHI	CALL		SHERWOOD • BEL • BAZOOKA	CALL	
GFA 6000	CALL		YAMAHA	CALL		FOR	CALL	
CARVER	CALL		DENON	CALL		JBL • INFINITY • PIONEER	CALL	
TRAXX	CALL		H. KARDON	CALL		JVC • COLLINS • SONY	CALL	
NAD	CALL		PIONEER	CALL		PRICE	CALL	
218THX	CALL		SONY MINI DISC	CALL		CALL ABC FOR SONY HOME AUDIO		

All products are new USA merchandise covered by the manufacturer's warranty or ABC's exclusive limited warranty and are backed by our 10 DAY MONEY BACK GUARANTEE. MEMBER OF THE BETTER BUSINESS BUREAU.

VIDEO STABILIZER. Removes viewing problems from movies. ON/OFF (BA) Switch. Gold plated connectors. Free power adapter. VHS \$49.95. SVHS \$79.95. 1-800-831-2050.

BOOKS & PUBLICATIONS

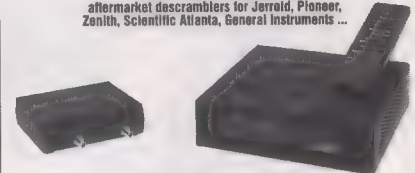
DENMARK, U.S.A. Nudism lifestyle: family recreation. Infopack \$3. Videos, magazines. Lifestyles-V, Box 661268, Los Angeles, CA 90066.

Fun Family Camcorder projects book "Video/Cinema." Send \$18.95—Frantz, 2626 Lakeview, Chicago, IL 60614.

CABLE TV EQUIPMENT

Cable TV Descramblers

We offer a full line of original and aftermarket descramblers for Jerrard, Pioneer, Zenith, Scientific Atlanta, General Instruments...



GALT, INC.

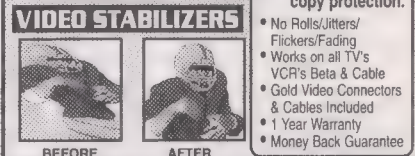
CALL 800-487-2225

6325-9 Falls of the House Road
Suite 310
Raleigh, NC 27615

CABLE TV. CONVERTERS & ACCESSORIES. Fair Prices, Quality Service, & 14 years Experience Gives Us The ADVANTAGE. CALL 1-800-952-3916 Visa/MC/Amex/Disc/COD. ADVANTAGE ELECTRONICS, INC., 1125 Riverwood Dr., Burnsville, MN 55337. MEMBER OF NCCA.

COPY RENTAL TAPES WITH OUR VIDEO STABILIZERS

The clearest picture possible playing back movies. GUARANTEED to eliminate copy protection.



- No Roll/Jitters/Flickers/Fading
- Works on all TV's
- VCR's Beta & Cable
- Gold Video Connectors & Cables Included
- 1 Year Warranty
- Money Back Guarantee

VISION ELECTRONICS
1-800-562-2252

2125 S. 156TH CIRCLE • OMAHA, NE 68130

CABLE DESCRAMBLERS—BUY DIRECT! ROCK BOTTOM PRICES. #1 IN CUSTOMER SERVICE & LOW PRICES! THE CABLE OUTLET: 1-800-203-7077.

CABLE TV EQUIPMENT

FREE Catalog

CABLE TV DESCRAMBLERS
BEST PRICES & FRIENDLIEST SERVICE.
 FIRST CALL THEM, THEN CALL US.
 ALL MAJOR BRANDS AVAILABLE.
 DEALERS WELCOME
 30 Day Guarantee • 1 Yr Warranty
GLAMORE ELECTRONICS
1-800-665-1687
 VOID WHERE PROHIBITED BY LAW

CABLE TV CONVERTERS/DESCRAMBLERS/ACCESSORIES. All makes & models. Immediate shipping! VISA/MC/COD. Satisfaction guaranteed. Wing Wholesale Electronics, Minneapolis, MN 800-304-4408.

CABLE T.V. CONVERTERS & DESCRAMBLERS: Replacements for most models. 30 Day Trial—1 Year Warranty! Dealer Inquiries Invited. Visa/MC/Disc/Amex/COD FOR QUALITY, PRICE & SERVICE CALL: 1-800-259-1187. Eagle Electronics Inc., #1, 1301 Railhead Blvd., Naples, FL 33963. No Florida Sales.

CABLE DESCRAMBLERS. BARGAIN HEADQUARTERS, WHOLESALE PRICES. ABSOLUTELY THE LOWEST PRICES! MONEY BACK GUARANTEE. NOBODY BEATS US! R P ELECTRONICS: 1-800-304-3604.

CABLE HOTLINE
 Cable TV Descramblers • Converters
 All Major Brands • #1 In Customer Service • 30 Day Money Guarantee • 2 Year Warranty
 Call For Price Quote. Please Have Make And Model Number Ready When You Call.
 Frequent Buyer And Quantity Discounts
 Absolutely The Lowest Prices!
1-800-203-7077 The Cable Outlet
 800 West Sahara • Las Vegas, Nevada 89117

REVOLUTIONARY TECHNOLOGY. Does all Boxes - For Free Catalog Please Call Mega Electronics 1-800-676-6342.

SECRET CABLE DESCRAMBLERS! Build your own Descrambler for LESS than \$12.00 in SEVEN EASY STEPS! RADIO SHACK Parts List and FREE Descrambling Methods that COST NOTHING To Try, Included. Send \$10.00 to: INFORMATION FACTORY, P.O. Box 669, Seabrook, Texas 77586. For VISA/MC, C.O.D.'S, 1-713-922-3512 Any Time!

LINK YOURSELF TO THE FUTURE WITH OUR EXPERIENCE! CABLE TV CONVERTERS & DESCRAMBLERS. QUALITY, SERVICE & SATISFACTION GUARANTEED! VISA/MC/AMEX/C.O.D. ACCEPTED. QUANTITY DISCOUNTS. CABLE LINX, INC., MINNEAPOLIS, MN: 1-800-501-0095.

CABLE TV CONVERTERS/DESCRAMBLERS— Don't Pay Retail—Buy from the Wholesaler. 30 Day Money Back Guarantee. No PA sales. **DIRECT CABLE SUPPLY INC.: 1-800-808-3356.**

CABLE TV Converters Descramblers Accessories

- **BEST** Prices
- Quality merchandise by brand name manufacturers
- Excellent customer service representatives

• Save money by purchasing instead of renting
 • **FREE 30 day trial period and 1 year warranty.**

Call for your free catalog
MicroCom Industries
800/665-2002
 MasterCard • VISA • AMX • COD
 Dealer inquiries welcomed!

CABLE TV DESCRAMBLERS
 • Quantity Discounts • 24 Hour Shipping
 • Save Money Don't Rent
NOBODY BEATS OUR PRICE
 Call Us Last For Best Price
1-800-677-0321
 Anyone implying theft of service will be denied service
 VCI - NO FLORIDA SALES

CABLE TV EQUIPMENT & ACCESSORIES! Wholesalers Welcome! 30 Day Moneyback Guarantee! Free Catalog! **PERFORMANCE ELECTRONICS, INC., 1-800-815-1512.**

CABLE TV EQUIPMENT

NU-TEK ELECTRONICS
 Leading the way to excellence

Cable TV Converters and DESCRAMBLERS

NU-TEK ELECTRONICS offers all major brands of cable TV equipment

STARGATE SST
Features include:
 • Upgradeable card slot
 • Volume control
 • Parental control
 • Audio/Video ports
 • Sleep timer

BEST SELLER

CALL FOR OUR FREE CATALOG

Ask about the Modulator-A must for any home theater system!

1-800-228-7404 ups express

CAPTIVE AUDIENCE??

20th Year Anniversary **#1 in Customer Service**

CABLE TV CONVERTERS

MasterCard VISA

ASK ABOUT OUR FREE *** BLUE BLOCKER *** SUNGLASSES OFFER

WE CARRY ALL MAJOR BRAND NAME CABLE TV CONVERTERS

- * YOUR SATISFACTION IS OUR #1 PRIORITY !
 - * 30 DAY MONEY BACK GUARANTEE !
 - * 1 YEAR WARRANTY ! WE SHIP C.O.D. !
 - * OUR UNITS ARE GUARANTEED TO WORK !!
- PLEASE HAVE THE BRAND NAME & MODEL NUMBER OF YOUR CABLE COMPANIES CONVERTER, BEFORE CALLING.

WE WILL MEET OR BEAT ANY VALID PRICE QUOTE.
 UNLIKE SOME OF OUR COMPETITORS, WE ARE HAPPY TO SPEND THE TIME TO ANSWER YOUR QUESTIONS CONCERNING THE PURCHASING OF OUR EQUIPMENT.

VISUAL COMMUNICATIONS INC. FOR CATALOG OR INFORMATION CALL 1-717-620-4363

**** SORRY NO PENNSYLVANIA SALES ****
 FRIENDLY - PROFESSIONAL - SERVICE - SINCE 1975

*** FOR ORDERS ONLY *** 1-800-GO-CABLE

615 MAIN STREET SUITE 206 STROUDSBURG PA. 18360-2025
 BY PURCHASING CABLE EQUIPMENT FROM VISUAL COMM. THE CUSTOMER AGREES TO COMPLY WITH THE FEDERAL LAWS REGARDING PRIVATE OWNERSHIP OF CABLE TV EQUIPMENT. IF YOU ARE UNSURE OF THESE LAWS CHECK WITH YOUR LOCAL OFFICIALS. ANYONE IMPLYING THEFT OF SERVICE WILL BE DENIED SALE OF EQUIPMENT.

Cable Descramblers
 We'll beat anyone's price!
 1 Year Warranty 100% Money Back Free Catalog
 Filters • Converters • Accessories
ORION Electronics **1-800-379-3976**

CABLE TV DESCRAMBLERS/CONVERTERS. Jerrolds, Scientific Atlanta, Pioneers, Zeniths, Tocoms. Best Prices! Moneyback Guarantee! FREE CATALOG! ALLSTAR: 1-800-782-7214.

CABLE DESCRAMBLERS

No 800# ... No Catalog

Just LOW, LOW Prices!

Call the rest, then call us for the best price.

305-425-0751

NO FLORIDA SALES!

CABLE TV FILTERS

FOR ELIMINATING NOISE FOR BLOCKING UNWANTED CHANNELS



\$30 each MC OR VISA - FREE SHIPPING
 30 DAY MONEY BACK
 DEALERS WANTED

Specify channel number - 2 thru 36 only

STAR CIRCUITS
1-800-535-STAR

CABLE TV Why Rent? When You Can Own. Low Prices, Quality Products. Call **TONITE** 6PM-11PM EST. 1-800-865-7493. Free Catalog. True Value Electronics, P.O. Box 591, Lincoln, NH 03251.

BEST DEALER PRICING!
30 DAY FREE TRIAL!
CABLE DIRECT
DESCRAMBLERS CONVERTERS • FILTERS
COPY RENTAL TAPES WITH OUR VIDEO STABILIZERS
 Now you can tune-in to your favorite cable TV programming and **SAVE \$100'S - EVEN \$1000'S** on premium CABLE TV EQUIPMENT.
FREE Cable TV Catalog. 1 YEAR WARRANTY

MODERN ELECTRONICS
1-800-906-6664
 2125 S. 156TH CIRCLE • OMAHA, NE 68130

CABLE BOX WHOLESALE, INC.

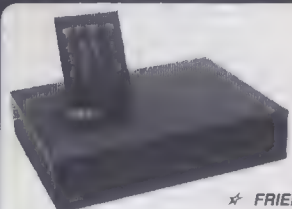
Get the latest technology in cable converters and descramblers

- Best prices
- Save on equipment rental fees
- Quality merchandise by brand-name manufacturers
- Friendly personal service
- Thirty-day money back guarantee
- All orders delivered fast and conveniently via FedEx Economy Two-DaySM service



You'll appreciate the premium view when you order from us! Call for free catalog
632 W. FLORES, TUCSON, AZ 85705 **1-800-841-7835**

CABLE T.V. CONVERTERS & DESCRAMBLERS



TKA ELECTRONICS
7914 W. Dodge Rd. #334
Omaha, NE 68114

- ★ 13 MONTH WARRANTY IN WRITING ★
- ★ FRIENDLY SERVICE ★ 30 DAY TRIAL PERIOD ★

FOR A FREE CATALOG OR TO PLACE YOUR ORDER CALL:

1-800-729-1776

HAVE A BEEPING SOUND WITH SCRAMBLED VIDEO ON SOME CHANNELS?—WE CAN HELP! PROFESSIONAL QUALITY POSITIVE FILTERS. \$22.00 EACH. DISCOUNTS ON 5 or MORE. FAST, COURTEOUS SERVICE. C.O.D., CREDIT CARDS. CALL 800-820-8884, EXT. 4888.

CABLE T.V. EQUIPMENT!

All makes and models! Low Prices. Quantity discounts. FREE CATALOG. C.O.D orders accepted. No Illinois orders.

L&L ELECTRONICS INC.
1430 Miner Street, Suite 522
Des Plaines, IL 60016
We Accept MasterCard and Visa
1-800-542-8190

YEARS OF CUSTOMER SATISFACTION!

VIDEO CLARIFIER



- Eliminate adverse effects of copyguard!
- State-of-the-art circuitry restores original (master) quality in all video tapes.

CAT# VC-1

ONLY \$59.95 each



Black Feather ELECTRONICS

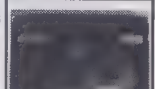
SATISFACTION GUARANTEED

645 Temple 7-V ▲ Long Beach ▲ California 90814
(310) 434-5641 ▲ FAX (310) 434-9142

CALL 1-800-526-3717

CAMCORDER VIDEO TAPES

- Used Hi-8 Tapes
- Excellent Condition
- S-VHS, Other Tapes Available



CAT# CCT-1

ONLY \$3.00 each
10 or more — 2.80 ea

1. California residents must include sales tax.
2. VHS, MasterCard, or Moneyorder.
3. Quantities limited — prices subject to change.
4. Shipping \$4.00 & up.

R2/V5/CFT 1 Wire HRC/STD ch. 3/4. Limited time offer \$14.00 min.10. Visa, MC and COD OK. 1-800-831-2050.

TEST MODULES. TRACKER NOW AVAILABLE. LONG ISLAND? TEST CHIPS FOR ALL CABLE CONVERTERS. CALL 1-800-503-9222.

TV NOSTALGIA

TV GUIDES. CATALOGUES \$2.50. TV COLLECTIBLES, MAGAZINES, PLAYBOYS, ETC. CATALOGUE \$3.00. ROGOFKY, BOX 107-VM, GLEN OAKS, NY 11004.

WIRELESS CABLE



Quality Microwave TV Systems
WIRELESS CABLE • ITFS • MMDS
ATV • INTERNATIONAL • S-BAND
Amplifiers • Antennas • Books • Components
Filters • Systems • Video Products
• RF Frequency 1990 - 2700 MHz
• Cable Ready - VHF - UHF Outputs
• SASE For "FREE" Catalog or Send \$1

PHILLIPS-TECH ELECTRONICS

PO Box 8533 • Scottsdale, AZ 85262
ORDER LINE 800-880-MMDS
CATALOG/INFO 602-947-7700
FAX LINE 602-947-7799

CHALLENGER SYSTEM
33-Channel 52dB+ Gain
Complete Grid \$265
Five Year Warranty
FREE SHIPPING

Visa • M/C • Amx • Disc • COD's • Qty Pricing

HOME THEATER

ALL MAJOR BRAND LCD PROJECTORS - LOWEST PRICES WORLDWIDE!!! ULTRA HIGH-GAIN PROJECTION SCREENS (GAIN: 13.2)!!! "DEPIXELATION" OPTICS: SEAMLESS, HIGH-RESOLUTION PICTURES FROM LCD PROJECTORS!!! POLI-VISION, 187-V CY-PRESS, THROOP, PA 18512-1429 (PH: 717-489-3292).

LASER DISCS

• 42% OFF LASERDISCS • THE LASER IMAGE. SINCE 1980, 5000 Discs • Image Entertainment Dealer • PH: (970)586-8360 • FAX: (970)586-2728.

ADULT LASERDISCS. Hundreds of titles! Catalog: \$3.95. AMERICA PICTURES, Dept. V, 309 Judah, San Francisco, CA 94122. (415) 566-1212. Visa/MC.

LASER DISCS UP TO 60% OFF! FREE CATALOG. LASER EXCHANGE, SUITE #275, 444B BROADWAY, SAUGUS, MA 01905-1995. (617)231-8010.

1000'S OF NEW & USED LASERDISCS!!

CASH FOR YOUR LD COLLECTION!!
NO COLLECTION TOO LARGE OR TOO SMALL FOR US!! 1 DISC OR 10,000!

WE HAVE MOVIES ON CD-ROM & CD-II!

We ship only to N. American & APO/FPO addresses

Mass. Residents add 5% Sales Tax
Call or write for our FREE catalogs!!!
Sight & Sound 617 894-8633 fax 617 894-9329

27 Jones Rd., Waltham, MA 02154



FREE LASERDISC CATALOG. 15-20% OFF ALL TITLES. LASER OUTLET, 366 N. ALLEN AVE., STE. 250, DEPT. 6, PASADENA, CA 91106. (818) 821-4161.

USED LASERDISC CLEARANCE. Rare Titles. Save Money. FREE CATALOG. VDI/C, 5339 Prospect #221, San Jose, CA 95129.

SATELLITE TV

NEW SATELLITE DESCRAMBLER! Secret descrambler manuals, videocipher sound, kits. Catalog \$1.00 "Snow", P.O. Box 22048 Lansdowne, Stjohn, Canada E2K 4T7.

SAVE
40%~60%

SATELLITE TV

FREE
68 pg
Catalog

NAME BRAND EQUIPMENT & ACCESSORIES
Systems • Upgrades • IRDs • Movers • Feeds
LNBs • 3' to 24' Dishes and much more...
100% Satisfaction Guaranteed!

1-800-334-6455
218-739-5231 Int'l
Skyvision®
1028 FRONTIER DRIVE FERGUS FALLS, MN 55637
INSTALL OR UPDATE YOURSELF!

RCA-DSS Defeated! Learn how. Postage \$1.00, "SNOW" P.O. Box 22048-DSS, Lansdowne, Stjohn, Canada E2K 4T7.

100% Financing Available \$100 SAVINGS!



on the new
RCA 18"
Satellite System



Financing available with approved credit.
Professional installation required.
Special offer not available for RV's.

FOR THE BEST
PRICE CALL
1-800-411-9813

TRANSFERRING/DUPLICATION

FOREIGN DIGITAL CONVERSIONS from \$19.95 NISC/PAL/SECAM, VHS, S-VHS, Beta, Hi8, 3D Research, 20120 Route 19, Suite 105-274, Cranberry Township, PA 16066 TOLL FREE 1-800-735-8582.

MISCELLANEOUS

GROW HAIR 4 Months! New Discovery! Box 1012-V, Makati 1250, Philippines. Follicles reactivated. Brochure \$1.00.

ACCESSORIES

SINGERS! REMOVE VOCALS
Unlimited, Low Cost, Instantly Available
Background Music from Original Standard
Recordings! Does Everything Karaoke
does... Better and gives you the
Thompson Vocal Eliminator™
Free Brochure & Demo Tape.
LT Sound Dept V86
7988 LT Parkway
Lithonia, GA 30058
24 Hour Demo/Info Request Line (404)482-2485 Ext 99
When You Want Something Better Than Karaoke!

Copies of articles from this publication are now available from UMI Article Clearinghouse.

U-M-I

800-521-0600 toll-free
313-761-4700 collect from Alaska and Michigan
800-343-5299 toll-free from Canada

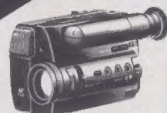
INDEX TO ADVERTISERS

READER SERVICE NO.	ADVERTISER	PAGE NUMBER
19	a/d/s/	70
33	Abe's of Maine	117
1	Adcom	29
2	API	83
	- Audioquest	C3
55	Azden	53
27	B&K	89
6	Battery Tech	130
54	Beach Camera	118
78	Bell'Oggetti	56
	- Berger Bros.	139
32	Bogen Photo	105
	- Boston Acoustics	67
48	Bryston Vermont	69
15	Cable Warehouse	134
29	Cambridge SoundWorks	22-23, 24
36	Camera Sound	108
47	Camera World	126
'8	Canon	55
41	Canon	81
9	Cerwin-Vega	18
20	Coast to Coast	119
21	Colonel Video & Audio	128
	- Columbia House	25, 27
85	ComputAbility	109
86	Counterpoint	95
30	DataVision	110-111
	- Definitive Technology	12
24	Definitive Technology	13
75	Denon	10-11
26	Electronic Mailbox	112-113
28	Electronic Mailbox	130
	- Electronic Wholesalers	121
	- Electronics Depot	116
34	Executive Photo & Electronics	127
35	Family Photo & Video	115
	- Haven Industries	105
56	Hitachi	4-5
42	Huppins (One Call)	114
81	Imaging Science Foundation	107
12	JVC	C4
87	KEF	77
37	Ken Crane's Laserdisc	104
70	Klipsch	45
	- Laserdisc Enterprises	132
73	Laserdisc Fan Club	106
59	Lenmar	80
	- Marantz	73
7	Marine Park	129
17	MD Electronics	139
52	Mitsubishi	75
19	Mobile Fidelity	90
43	Mondial	50
88	NAD	47
13	New West Electronics	131
11	NHT	6
63	NuReality	64
72	Onkyo	43
	- PARA	132
46	Paradigm	63
	- Pioneer	34
14	Planet Electronics	135
50	Polk	60
51	Powervideo	125
5	Primestar	C2-1
90	Proscan	56-59
49	Rock Solid of America	49
74	Samsung	2-3
77	Sharp	87
	- 8th Ave Electronics City	122
	- Smile Photo & Video	132
39	Smile Photo & Video	133
	- Sony	16a-16j
4	Sound City	123
	- Technics	38-39
65	Toshiba	14
	- Toshiba Seminars	99
	- Uncle's Stereo	126
76	USA Direct	120
	- USSB	9
38	Videonics	97
22	Vidcomp	124
	- XLO	103

AUTHORIZED!

50 Years
In
Business

TOOLS OF THE TRADE



SONY
HANDYCAM
CAMCORDERS

SONY
Canon
JVC

bogen

Nikon

HITACHI

VIDEONICS

bescor
NRG

PAL
Camcorders
& VCRs



SHARP
VIEWCAM

Panasonic

SHARP

STEADICAM

AMPHIBICO

AZDEN

SUNPAK

GO.VIDEO

RCA

CITIZEN

Berger Bros. Camera and Video Exchange specializes in both Photographic and Video Equipment. We carry the **Largest Selection** of Camcorders and Accessories in stock and at the lowest prices. We'll help you make the right choice over the phone, that's why we can offer a **full money back guarantee**. We could list all of our Equipment in our ads like everyone else...but we call that our 240-page Catalog.

1-800-262-4160

We Compete With Any Legitimate Price & We Ship Anywhere
When Tomorrow Won't Do. Call Us Today.

BERGER BROS.

CAMERA & VIDEO EXCHANGE

(516)-264-4160 • FAX (516)-264-1007

209 BROADWAY (ROUTE 110) AMITYVILLE, N.Y. 11701

Is your Cable Company Alienating You?

Say NO to unearthly
rental fees!



Owning your cable equipment saves you the high cost of monthly equipment rental charges, and gives you control of your TV.

We have the *Best* in

CONVERTERS and DESCRAMBLERS!

Everquest • Panasonic • Jerrold • Zenith • Pioneer
Scientific Atlanta • Oak • Eagle • Hamlin • Tocom

1 800 624-1150

**FREE
Catalog!**



MD Electronics

875 S. 72 Street • Omaha, NE 68114



Member of
National Consumer
Cable Association

Amazonic videos muscle in on role reversal

FULL NELSEN

THERE ARE PLENTY OF SPORTS VIDEOS CLAMORING FOR your attention. Annual highlights videos let you relive a pro season that—wonder of wonders—worked out exactly the way you wanted it to. (Pay for a set and you just may get a free subscription to *Sports Illustrated*.) How-tos promise to improve your chip-shot or serve, and the Oscar-caliber performances of their celebrity-hosts certainly are inspiring. You may even be able to convince your significant other that one of the various swimsuit tapes qualifies for a spot on your sports-video shelf. But you ain't seen nothin', Mr. Big Number One Sports Fan, until you take an interdimensional jaywalk into the alternative reality of the Amazonic Wrestling video.

These videos—which can be ordered from outfits like Karla Nelsen Productions, in Circle Pines, Minnesota, or Mass Muscle, in Fort Lauderdale, Florida—all share a fairly straightforward premise. Amazonic videos don't dither around much, you see, preferring to get right to the muscular proceedings, wherein a scantily clad tribunal of Terminator-like female bodybuilders ritually pounds the stuffing out of various scantily clad men. Sometimes the victim *du jour* is a wimpy 98-pound weakling, and sometimes he appears fairly fit. No matter—you know from the outset that he has a snowball's chance in Hades of making it out of the ring with a victory.

Leading the Amazonic charge is one Karla Nelsen, chief executive in charge of operations of Karla Nelsen Productions and considered by her fanbase to be the Queen of Amazonic Wrestling. The blonde-haired, bulging-biceped Nelsen, who has the sweet voice of a Midwestern Melanie Griffith and the physique of a tight end, is no longer fazed by the commotion she's caused ever since taking up body-building some 7 years ago. Whenever her 5'10", 213-pound frame fills a doorway, she says, conversation tends to fade faster than it did in an old E.F. Hutton TV commercial.

"I'm real comfortable with the look," Nelsen attests. She attributes the appeal of Amazonic videos to the mystery of it all. "Many men are real curious about my muscles," she says. "I think they just like seeing what I can do."

And see they do. Sometimes referred to by

her fans as the "Madonna of Muscle," Nelsen's considered the flesh-and-blood embodiment of the pen-and-ink fantasy women who inhabit the pages of L-H Art comic books (the graphic-arts company's comic-book tales have inspired many of the videos). Female fans don't seem to mind watching the male of the species get a comeuppance, either.

Beyond simple curiosity, what really lies at the core of Amazonic Wrestling's appeal? What makes people pay good money to watch Karla do her thing? "One man's Cindy Crawford or Anna Nicole Smith is another man's Karla Nelsen," Nelsen says. "Lots of men like a physically strong woman, though they don't—or can't—admit it. I think that a sizable percentage of men—if they watched me at work, or maybe saw me dressed up in evening wear—would be attracted on some level to what they were seeing."

Nelsen is also quick to recognize that her cult-sized following faces a bit of a societal stigma. "Muscle on a female is a confusing image for some guys," she sighs. "The people who buy my videos are mostly guys who can deal with the idea of a big, muscular woman like me—but it's often a secretive thing, since so many men are afraid to show any outward attraction to this sort of female physique."

And what about the contestants? What's the motivation for guys to venture onto the mats with The Queen of the Amazons?

"This isn't a test of strength or an exercise—it's challenge fantasy," clarifies Nelsen. "On some level, a guy might wonder what it's like to be overpowered or dominated, but not in a cruel or abusive way. It's more of an adventure, an escape from reality. Lots of the men I wrestle are in positions of power and control in their real lives, and a role reversal fascinates them."

Nelsen hastens to add that the wrestling matches never go too far.

"I don't like overly competitive matches," she says. "But men know that if they come in with an ego, they won't be leaving with one."

Queen Karla also leaves her bone-crunching in the studio, preferring to talk softly and carry a big gym bag; 5-day-a-week workouts include bench-pressing 300 pounds. But when asked who controls the remote at home, she simply smiles large.

—AJ Daudelin



PHOTO BY COHEN BROS.



Frame Of Reference:

This picture tells you a lot about AudioQuest cables, but without a frame of reference it doesn't tell you whether the boxes (or the viewer) are rising, falling or just floating. Many inferior cables are popular, even though comparison against a proper reference immediately reveals serious flaws. Because AudioQuest cables are referenced against *no* cable (the bypass test), we understand each cable's strengths and weaknesses. We know that AudioQuest cables will give you a performance closer to the original, whether on a mini-system or on a "big rig."

audioquest®

Excellence Redefined

The
Inventor
of VHS

JVC's GR-SZ9 represents the latest refinements in quality, creativity, and simplicity. Like a bright F1.2 lens and Digital Signal Processing for stunningly clear high-definition images — ideal for Super VHS high-resolution recording. A wider-than-ever selection of digital special effects that let you shoot professional style videos. And interactive in-viewfinder menus that make operation more user friendly than ever. The GR-SZ9 Compact Super VHS Hi-Fi Stereo Camcorder. It's excellence redefined. Definitely by JVC.



GR-SZ9U
Super VHS **Hi-Fi**
STEREO

Technically Perfect. Perfectly Simple.

JVC®

CIRCLE NO. 12 ON READER SERVICE CARD